

Amateur Radio

Volume 77 Number 10
October 2009

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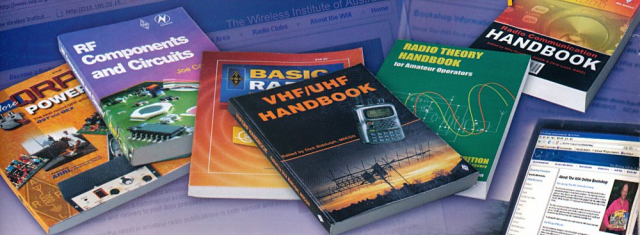
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Michael Owen VK3KI

Launching the WIA Centenary

A special call to radio clubs



This month's Comment and NEWS are launching the WIA's Centenary Celebrations and starting the countdown to a memorable and busy time.

The WIA's Centenary Committee has spent the past year planning for 2010 which is the Centenary of Organised Amateur Radio in Australia.

It was on 11 March 1910 that a group of wireless telegraphy enthusiasts met at the Hotel Australia in Sydney to form The Institute of Wireless Telegraphy of Australia, and set the foundation for the Wireless Institute of Australia we know today.

The commemorative logo on this page will be used by the WIA throughout 2010 to brand the celebration.

The WIA will conduct what has become its special annual meeting and associated activities in Canberra over Friday 28 May, Saturday 29 May and Sunday 30 May as a major part of the centenary celebrations.

During all of May 2010 the WIA will be using the special callsign VK100WIA, and under its licence WIA affiliated clubs will be able to take turns to use the callsign from 1 June to 31 October.

To enable this to happen, a roster of participating clubs will need to be set by the end of March 2010.

The WIA will be offering all amateurs in Australia and overseas a very attractive award, the WIA Centenary Award.

The Award rules and certificate, the VK100WIA QSL card, a display poster, electronic files and style guide for the commemorative logo and other information will all be placed on the WIA website on 3 October.

In addition, a range of exciting merchandise will also be on offer – do look at the WIA website on 3 October. The site will be updated as further plans develop.

It is expected that the callsign will be highly sought after on air, in order to obtain both the VK100WIA QSL card and the WIA Centenary Award.

Clubs are asked to plan now how they are going to celebrate the centenary. The WIA hopes that each club (or perhaps a group of clubs) will conduct an event that promotes amateur radio in its community, and also celebrate the event for their members and perhaps others in the local community.

These events may be part of an activity they already conduct, perhaps an annual hamfest. The use of the VK100WIA callsign may be in association with these events, or may be quite separate.

Since there are around 140 affiliated clubs, and only 153 days in the five months from 1 June 2010, initially three day roster slots for use of the callsign will be available.

We know that not all clubs will want to, or be able to participate in the special callsign activity by putting it on air.

A booking facility will be on the WIA website from 3 October, and through it clubs will be able to reserve a three day slot for their use of the callsign. It will operate like an airline seat booking facility, so if another block is still available, the club will be able to give up its first choice and select a new block.

Depending on the demand from clubs, later on, clubs may be able to extend their

period of operation if they wish and if the time they want is still available.

If the demand exceeds our expectations, then it will all be on a first come first served basis.

At the same time as the club reserves its slot for the callsign, it will be asked to tell us about its plans to celebrate the centenary and promote amateur radio. Of course, these plans will develop and so clubs will be asked to ensure that their information is always up to date.

All times, including the times for use by the clubs will be in UTC, and accurate logging in UTC will be essential. While clubs may use paper logs, it is hoped that the online logging facility on the website will be the main method used.

Those operating with the callsign are asked to frequently announce "This is VK100WIA Celebrating the Century of Organised Amateur Radio in Australia, being operated by members of the (.name of club..) in (.town/city/suburb and state..).".

Participating clubs will be assisted to seek local publicity about the centenary celebration and their involvement. The WIA will provide a media kit, other support plus a display poster.

Now is the time for WIA affiliated clubs to plan their activities between 1 June and 31 October 2010 and get on the VK100WIA callsign roster before the end of March 2010.

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**WIA News appears on
Pages 8-9**

Amateur Radio Service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

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The world's oldest National Radio Society, founded 1910.

Representing
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Editorial

Peter Freeman VK3PF

Centenary celebrations

The Centenary Committee has been hard at work. In this issue, you will find announcements regarding several initiatives that will be running during 2010, celebrating 100 years of organised amateur radio in Australia.

This month we see a different layout – as a once only event – to announce the Centenary celebrations. To maximise best use of colour, we have swapped the positions of our Contents page and WIA Comment. News has been moved (and expanded) to pages 8 and 9 for this month. We should be back to normal next month!

Why is this so important – the Christmas break is fast approaching and it is important that clubs carefully consider if they wish to be directly involved in the Centenary celebrations through the use of the special callsign. Make sure your club makes firm plans early so that you will have a chance of operating with the special event callsign.

New callsign

Somewhat out of the blue, I received a telephone call a few weeks ago. The caller was asking if I was interested in obtaining the callsign VK3PF. After thinking about the offer for a couple of weeks, I finally called Dick to accept the offer.

It turns out that Dick was a close friend of an amateur from South Gippsland with whom I was in fairly regular contact prior to his death early this year. Prior to his death, Len VK3LM had mentioned to Dick that I might be interested in Dick's callsign, if Dick ever wanted to pass on the callsign.

Dick is still licensed, having regained his previous callsign – VK3DDS. The application to transfer the VK3PF licence was sent off to Canberra and so now I have VK3PF – a two letter callsign with the suffix being my initials. Many thanks, Dick!

I have applied to the ACMA, through the appropriate mechanisms, to regain the old callsign – VK3KAI. I have held it for many years, since the introduction of the "Combined calls". I will eventually stop renewing that callsign. However, I will keep it for a while, at least until I have changed over my registrations at

several electronic mailing list servers and I stop receiving emails via the old email address. I now have a new WIA email address that reflects the new callsign.

New procedures for Hamads

Following some discussion, it has been decided that Hamads will be collated by the Publications Committee, as if the material was a column. The changes are reflected in the new details listed in this issue of *AR*. Basically, email your Hamads material to hamads@wia.org.au. If sending material via snail mail or via fax, send it to the WIA office, clearly marked as "Hamads".

2010 Callbook

The preparation of the 2010 Callbook is well underway. As this issue of *AR* becomes available, the Callbook should be almost ready to go to print and available for delivery late in October. It is expected that prices will be the same as for last year. Why not get together with your fellow local radio club members and have the club arrange for a bulk purchase? This will ensure prompt delivery to the club with savings in postal charges. Alternatively, keep your eyes open for a WIA stand at the next hamfest – I am sure that copies will be available for sale, once delivered from the printer during mid October.

RF safety

I have received a couple of comments regarding the cover photo of the September issue with regard to RF safety.

Exposure to RF fields is not an issue to be taken lightly – we all need to be very careful about exposure to electromagnetic fields, for both ourselves and for anyone within the immediate proximity. What does that mean? The Foundation Licence Manual gives some guidelines, but the easiest option is to hunt out the VK3UM Radiation Safety Calculator, part of Doug's excellent suite of free software. You can then select the operating band, antenna type and power level. The software will tell you the exclusion distance that everyone should be from the antenna to be safe.

I am assured by the author Compton Allen VK2HRX that the photo was a "set up" – this was not how things were actually done on the day! Some of the photos have been staged to make the photographs look more impressive.

73, Peter VK3PF

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Our cover this month

A Scout having fun with a handheld during a past JOTA event.
Get involved and help out this year—your local club should be able to point you in the right direction. Photo by Robert Broomhead VK3DN

Contributions to Amateur Radio

Amateur Radio is a forum for WIA members' amateur radio experiences, experiences opinions and news. Manuscripts with drawings and/or photos are always welcome and will be considered for publication. Articles on disc or email are especially welcome. The WIA cannot be responsible for loss or damage to any material. A pamphlet, 'How to write for Amateur Radio' is available from the National Office on receipt of a stamped self-addressed envelope.

Back Issues

Back issues are available directly from the WIA National

Office (until stocks are exhausted), at \$8.00 each (including postage within Australia) to members.

Photostat copies

When back issues are no longer available, photocopies of articles are available to members at \$2.50 each (plus an additional \$2 for each additional issue in which the article appears).

Disclaimer

The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

The HB10 transceiver

Bruce Kidgell VK3BMK

This is a story of an old transceiver, built in the late 1950's period, and which had not been used for over forty years, that the author decided to restore, more for nostalgic reasons than any other, given that he had actually built the unit when a much younger, and much less experienced 'electronics technician'. To all those readers who lived through this largely home-build era, the article will bring back many memories of practical self-development in the areas of receiver and transmitter theory and practice.

Early days - the 1950s and 60s

The HB10 was designed and built in 1957/58. It was the third in a series of receivers built in the 1950s. The first was a two valve TRF that my father built, with me looking on and learning. The second was a four valve superhet with plug in coils from an ARRL design in the 1942 *ARRL Handbook*. This was more of a joint project with my father. His expertise in the mechanical construction and winding of the plug in coils was much better than mine. We also had assistance and good advice from Neil Templeton VK3HG and Jamie Ferrier VK3MC, and also a supply of goodies from their respective junk boxes.

We lived on a farm in western Victoria and the only power available was 32 volts DC from the home lighting plant that was a generator belt driven from a 1924 vintage Lister stationary engine. The Lister's main job was to drive the milking machinery, so the batteries were charged when the cows were being milked.

The only tools available for constructing the radios were hand operated drills, hacksaw, files and a set of chassis hole-punches to make the holes for the valve sockets. The soldering was done using a

small plumber's soldering iron heated up on the kitchen stove.

The four valve superhet worked well and the log book shows that many DX stations, both amateur and commercial, were heard. Modifications were added over the next few months. The first was the addition of an audio output stage using a 38 output pentode, later changed to a 6V6 when the 38 failed. This was followed by the addition of a 6AC7 RF amplifier stage, S meter, and back-to-back IF transformers for more selectivity from the 1600 kHz IF stage aided by regeneration. A 28 V genemotor from army disposals provided the HT. There were separate tuning controls for the RF, mixer and local oscillator stages (the oscillator had both main and band spread tuning) and, together with the regenerative IF stage, the tuning in of a station and then optimising the tuning took quite a few seconds to complete.

In early 1956 I decided that I would build a better receiver and much time was spent pouring over *ARRL Handbooks* and advertisements in *Radio & Hobbies*, and coming up with the basic design. I decided to purchase a 'Gorler' coil turret

that was designed to cover 500 kHz to 30 MHz in six bands for receivers with a 455 kHz IF. I think this was purchased from Warburton and Franki in Melbourne. We also had an account with Radio Parts in North Melbourne where I was able to purchase items such as IF transformers and valve sockets, and the like, that were beyond the scope of our junk box. The receiver was largely paid for by trapping and selling rabbits to the local cool store in Coleraine.

The receiver was largely paid for by trapping and selling rabbits to the local cool store in Coleraine.

After a few months work, the receiver was working but I had already found one major problem. I had sited the coil turret in the middle of the chassis and it was extremely difficult to get at the coil slugs and trimmer capacitors to align the front end.

So, the MK2 came into being. The receiver was dismantled and the turret moved to the left hand side of the chassis where three large holes were punched in the side to allow access to coil slugs and trimmers. The valve line-up changed with a cascade RF amplifier using a 6J6 replacing the 6BA6, and a 6BA6 replacing the 6SK7 in the first IF stage. The third IF stage originally planned did not eventuate but the 6SL7 infinite impedance detector / BFO did, replacing the 6C8. Another 6SL7 for the audio preamp / S meter replaced the 6D6. A noise limiter using a 6H6, and a crystal calibrator using a 6C5, completed the upgrade to the MK2.

The block diagram of the HB10 Mk2 is shown in Figure 1. The first stations were logged on 28th February 1958.

In 1959 the farm was sold and we moved to the big smoke, Mount Waverley to be precise. My father and I studied for our AOC.P. Dad achieved his in 1959 (VK3AUK) and I finally obtained mine (VK3ASN) on the third try in 1960. 14 WPM CW was my problem.

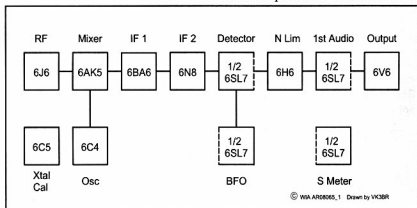


Figure 1: Block diagram of the HB10 Mk2 receiver.

My first transmitter was a modified Command transmitter using a 6V6 as the power amplifier. This had the huge DC input power of 5 watts. The receiver was the HB10. The Command transmitter was soon retired and its place taken by a home-built transmitter using a Gelooso VFO driving a pair of 807s. Screen grid modulation was used, driving the 807s in push pull and modulating them, and by having the outputs in parallel it operated as a high level balanced modulator and we were able to transmit a double-sideband suppressed-carrier transmission.

Several modifications were made in the early 1960s. These included an AC power supply; band-spread by fitting a three gang capacitor and dial in parallel with the main tuning gang; and revising the BFO, detector and calibrator circuitry, and the layout.

The 6J6 failed and was replaced, firstly with a 6BA6, and then with a 6AH6, a sharp cut off high mu RF pentode.

In 1964 I purchased a Kingsley AR7 and the HB10 was put aside, but somehow it survived many moves and shack clearances until, in August 2007, I decided to check it out and see if it could be restored.

The restoration - 2007/2008

The poor old receiver was now 50 years old. Rust was appearing through the cabinet surface and front panel, and there was 42 years accumulation of dust and cobwebs. Not a pretty sight! The shack vacuum cleaner soon sorted out the dust and spiders, revealing the sorry sight of ancient and leaky capacitors, and resistors that were old when they were salvaged for use 50 years ago.

There was also the problem of a suitable power supply. The 1960s AC supply had long since disappeared and a search through my junk box for a suitable transformer did not come up with anything capable of supplying the required 250 volts at 100 mA. Fortunately, Peter VK3AUO kindly donated a power supply that was surplus to his needs and that could be easily modified to do the job.

I decided to include a VR150 regulator to provide a regulated 150 V supply for the mixer, local oscillator, BFO and the reference voltage for the noise limiter. This was a serious omission in the original design.

With the power supply problem solved it was time to have a closer inspection

of the electrics inside the set. Shock, horror! Was my soldering really that bad back then? Look at those long leads on the bypass capacitors. No common earth points for the various stages.

When I built this set I had never actually seen inside a communications receiver. My short experience had been with old broadcast receivers and what I could glean from books and magazines, and after many years experience in the radio communications industry the HB10 now looked very, er well, 'amateurish'.

I decided to plan the restoration. I wanted to restore it to its original performance and specification. It would not be used as a station receiver but would provide entertainment in the shack in the form of short wave broadcasts, WWVH for setting clocks, and also demonstrate the strengths and weaknesses of a home built receiver of the 1950s.

If I could improve its performance without changing the basic design and construction by using the knowledge and experience gained over many years, then that would be OK. As it was built before SSB appeared on our bands, I decided not to include a product detector. However, I did decide to carry out two improvements that were on the books to be done before it was retired. These were the addition of cathode followers for the

local oscillator and the BFO. This would allow tighter coupling to the mixer and detector without pulling of the oscillators. These could be added without having to increase the number of valves so it is still an HB10.

So, together with these two additions, the restoration would address the external cosmetic appearance, the replacement of all faulty and suspect components, the tidying up of the wiring and earthing, and a complete realignment.

I do not think a complete circuit diagram was ever made, therefore the first task was to sit down and circuit trace the whole receiver. A secondary result of this was that a couple of original wiring errors were revealed. The documentation for the Gorler Turret had also long disappeared and there was no record of the coverage of each band, nor the alignment points.

Starting with the audio output stage and working towards the front end, the components and voltages of each stage were checked, the wiring tidied up, and faulty components replaced. After freeing up the ferrite slugs that had seized, the IF stages were realigned from 500 kHz back to 455 kHz. This was the first time a signal generator had been used for alignment on the set.

A few hours work and everything was working, but three problems immediately stood out. Firstly, there was considerable instability with neither the IF or RF gain

In 1964 I purchased a Kingsley AR7 and the HB10 was put aside, but somehow it survived many moves and shack clearances until, in August 2007.....

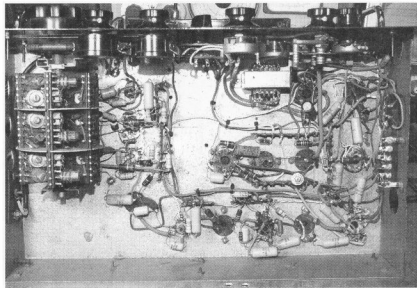


Photo 1: Inside view of the HB10.

controls able to be turned up to maximum before oscillation occurred. Poor earthing practices, and deterioration of the earth points by corrosion, were suspected of being the main reason for this. And the last two problems were distortion higher than I was prepared to accept, together with 50 Hz hum on stations received. In spite of this the set actually worked for the first time since 1964.

To combat the instability, every earth point on the chassis was cleaned of corrosion. Around the front end the earth connections were soldered directly to the chassis. This, and better decoupling on the HT supplies to the RF and IF stages, solved all instability problems.

The twisted lead 6.3 V AC heater wiring was floating above ground, but earthing one side of the 6.3 V supply where it entered the set cured the hum problem. The distortion problem was cured by optimising the operating conditions of the infinite impedance detector and fixing a wiring error in the noise limiter stage.

A cathode follower, using the second half of V6, a 6SL7 twin triode (the first half is the detector) was inserted and the coupling to the detector increased to just below the level where pulling of the oscillator was apparent. This improved the set's ability to handle strong SSB and CW signals.

Now it was time to turn my attention to the front end alignment. Firstly, the Gorler coil turret was dismantled and all the contacts were cleaned and burnished. Then I did away with the band spread

tuning. It was an add-on in the early 1960s and had long leads. This lead to strange coupling effects and frequency instability on the higher bands, and also had made it difficult to align the front end, so out it went. I also decided to change the 6AH6 RF amplifier valve back to a 6BA6 and run the AVC line to it, but not to add the cathode follower to the local oscillator just yet.

The tuning capacitor and dial drive were not as smooth as I would have liked and there was a tendency for the set to jump a few kHz from time to time. The tuning capacitor was removed, stripped, bearing faces and ball bearings cleaned and then reassembled with light grease, and then finely adjusted for no endplay. Copper braid earth straps from the chassis were attached to the brass wires, acting as brushes, which bear against the rotor shaft and so provide the best possible earth circuit for the tuning capacitors. The planetary dial drive was also dismantled, cleaned and lubricated.

I had a rough idea of the frequency range for each of the six bands so, starting with the lowest band, 550 kHz to 1100 kHz, I started the alignment. This proceeded OK with some to-ing and fro-ing with the ranges when it was obvious that slugs were either too far in or out.

All went well until we got to band E. No matter what I tried, I could not get the

mixer circuit to track at all. I could peak it at the high end with the trimmer capacitor but 'no go' at the low end with the coil. I vaguely remembered that it had never worked properly but it had been possible to peak it at 14 MHz so that it worked on 20 metres OK.

It was time to investigate. Out came the Band E biscuit and an inspection showed that the wiring to pin three that connected to the tuning capacitor in the mixer circuit had never been connected! So much for quality control and testing at the Gorler factory! After making the connection on the biscuit, band E aligned very well.

But that was not all. Band F, 15 to 30 MHz had never worked properly, either! The CRO showed that the local oscillator output was low and it ceased working altogether over the lower half of its frequency range. Out came the band F biscuit and an inspection revealed that it had a wiring error in the oscillator section. With the error corrected, Band F performed as it should.

I now tackled the job of inserting a cathode follower between the local oscillator and the mixer. My first inclination was to use a 6U8 triode pentode as a cathode follower / mixer but the pin outs did not allow a neat and logical layout to be achieved. So I went ahead with the second option of replacing the local oscillator valve, a 6C4 triode, with a 12AU7 that is actually two 6C4s in one envelope. The only down side being that I had to fit a B9A base in place of the original B7G. The circuit worked very well, allowing much tighter coupling to the mixer. In the original circuit there was no actual coupling capacitor, the coupling being stray coupling to any number of components within the front end.

A quick touch up on the front-end alignment and it was time to do the cosmetic restoration.

The front panel was removed, wire brushed, sanded down and the rust treated with rust converter. The metal cabinet was given the same treatment and then both were primed and given a finishing coat of Brunswick Green enamel. The front panel was reattached to the chassis and control labels put in place, and it looked very handsome. The last job was to plot the tuning curve for each of the bands

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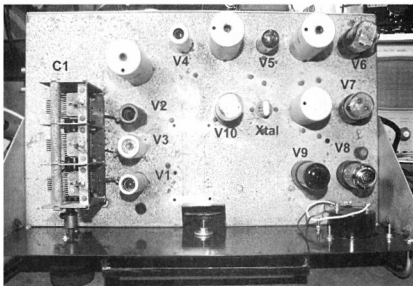


Photo 2: The top view of the HB10.

onto the six 'Tuning Charts'. These are attached within a modified picture frame attached to the front panel.

What would I be tempted to do to improve the old girl? Its weakest link is the tuning capacitor and dial drive, followed closely by the lack of shielding between the front end stages. Tuning on Band F, 15 to 30 MHz, is so touchy as to be almost unusable. Therefore, I think I would rebuild the front end into a really solid, thick aluminium box with shielding between the RF mixer and local oscillator stages. The two new high quality tuning gangs for main tuning and band spread tuning would be on top with both matched to better tuning mechanisms than the 50/1 planetary drive that it currently has. A product detector with a shielded BFO would also be a worthwhile improvement.

However, I don't think this will happen as there are other projects waiting. The first one being the restoration of an ex RAN HF WT1051B transmitter manufactured by TCA in Sydney in 1961. It is good for 150 watts DC input on AM or CW. This was last used about 15 years ago on 160 and 80 metres. Come to think of it, the HB10 would make a good companion receiver for it.

Circuit description and alignment information

The HB10 Mk2 is a 10 valve, single conversion super-heterodyne receiver. A Gortler six band coil turret provides the tuned circuits for the RF, mixer and local oscillator stages. The coil turret was designed to provide coverage from 500 kHz to 30,000 kHz in six bands for receivers with a 455 kHz IF amplifier chain.

One RF stage is provided (V1) using a 6BA6 variable μ RF pentode. The gain of the stage is controlled both manually by the RF gain control in the cathode circuit and by the AVC line. When the 'Op / Stdby' switch is in the 'Stdby' (standby) position, an 82 k Ω resistor is placed in series with the cathode resistors of both the RF and first IF stages.

The mixer stage (V2) uses a 6AK5 RF pentode biased to something like class AB by the 6k8 resistor in the cathode circuit. Both the anode and the screen grid voltage are supplied from the 150 V regulated rail. The signal from the RF stage is fed to grid one via a 56 Ω resistor located on the coil turret biscuit. The local oscillator

signal is also fed to grid one via a 27 pF ceramic capacitor.

V3 is a 12AU7 twin triode. It is the equivalent of two 6C4s in a single package. One half of this valve is used as the local oscillator and the other half is configured as a cathode follower. The oscillator is a tuned grid type and the HT is supplied from the regulated 150 V rail. The output is taken from the anode of the oscillator to the grid of the cathode follower. The output from the cathode follower is applied to the grid of the mixer via a 27 pF ceramic capacitor.

The first IF stage (V4) uses a 6BA6 and is of a standard design. The gain of the stage is controlled both manually by the IF gain control in the cathode circuit and by the AVC line.

The second IF stage (V5) uses a 6N8 duo diode pentode as an IF amplifier and AVC rectifier. The amplifier has AVC applied but no manual control. The delayed AVC is derived from a sample of the IF output signal from the anode of the 6N8 and is rectified by one of the internal diodes. AVC is applied to the RF stage and first and second IF stages. The

AVC voltage can be disabled by the 'AVC Off' switch.

V6 is a 6SL7 twin triode. One half being an infinite impedance detector and the other half being a cathode follower feeding the BFO signal into the grid of the detector.

The series noise limiter uses a 6H6 twin diode (V7) with manual level control. The audio then is amplified by half of V8, a 6SN7 twin triode. The other half of V8 is a bridge circuit for the S Meter, with the AVC voltage being applied to the grid, with the bridge components and meter in the anode circuitry.

V9 is a 6V6 beam power output beam tetrode. Audio from V8 is applied to the control grid via the 'Volume' control. The audio output is applied to a built-in eight inch twin cone speaker. Audio for the headphones is supplied from the anode of the V9 via a 0.1 mF capacitor. A simple top cut filter consisting of an 820 pF capacitor between anode and G2 can be switched in by the 'Tone' switch. **ar**



Photo 3: The restored HB10 is on the bottom right. To the left is the restored ex VK3AUL transmitter. The power supply is on the top, the modulator in the middle and the transmitter on the bottom.

About The WIA Centenary

The celebration is recognition of the foundation of the WIA and the very start of organised amateur radio in Australia during 1910. It has also helped to focus renewed attention on the early history of amateur radio in this country through careful research in a way not previously known to have occurred.

The beginnings

Prior to the Wireless Telegraphy Act of 1905 there was no real regulatory control of the radio spectrum, although early demonstrations and experimentation began in Australia in the late 1890s. At the time the government wanted to protect its revenue from the wired telegraph system and initially considered wireless telegraphy to be of little use, but it then became useful for ship to shore communications.

Private wireless experimenters were considered a hindrance to the emerging maritime use of wireless. Others began to recognise a greater potential use of the technology. Conflict between the commercial and amateur use of the spectrum was evident and licensed operation began in 1905.

Within five years experimenters needed to get organised for their very survival. The experimenters experienced what they felt was harsh treatment by authorities in respect to interference investigations and also the requirement to pay a three Guineas (\$6.30) licence fee.

Organised amateur radio

On 11 March, 1910 a meeting of like-minded people in the Hotel Australia, Martin Place, Sydney, formed the Institute of Wireless Telegraphy of Australia, and soon after dropped the word 'telegraphy' from its name.

Chairman of the founding meeting, George Taylor, proposed "the formation of an institution amongst experimenters and enthusiasts in wireless for their mutual benefit."

A similar organisation was formed in Melbourne - the Amateur Wireless Society of Victoria, on 30 November 1911 at a meeting attended by 50 enthusiasts. In 1913 it changed its name to the Wireless Institute of Victoria, and then became the Wireless Institute of Australia, Victorian Division.

Then followed The Wireless Institute of Queensland (1912) and the West Australian Radio Club (1913) became the Wireless Institute of Australia, Western Australia Section.

War-time security measures

Due to World War I all experimental stations were closed from August 1914. The Wireless Institute of Victoria decided to maintain the right to wireless experimentation after the war and offer its services during the conflict.

The experimenters were back on air after the war, although not immediately and even then with many restrictions. Those in South Australia formed a WIA branch in November 1919, the Tasmanian Division of the WIA (1923) and in the same year the Launceston Wireless Club was granted affiliation. Suburban clubs also began, for example the Waverley Amateur Radio Club in New South Wales (1919) which continues today.

A photograph of some of that club's founders feature in material used for the centenary celebrations.

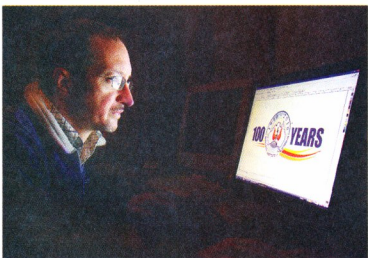
While the history can only be briefly covered in this article, the post-war era was an exciting time in many ways when wireless became radio through voice transmissions. Experimenters were achieving the wireless contacts with overseas countries.

A nation-wide organisation

A meeting held in Melbourne in May 1924 saw the establishment of a nation-wide organisation representing the experimenters, an outcome that had been desired for some time by the Postmaster General who had responsibility for wireless.

Exactly 100 years on from that first meeting in Sydney, the experimenters, now known as radio amateurs, can legitimately celebrate the establishment of their representative organisation, the Wireless Institute of Australia - the oldest such group in the world.

Creating the WIA commemorative logo



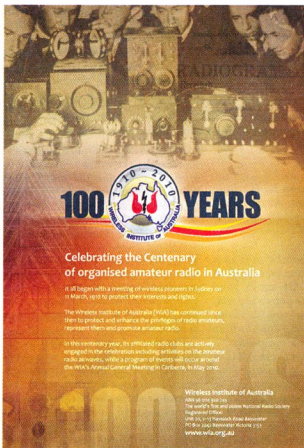
Graphic designer Ivan Smith applying finishing touches to the Centenary logo

The WIA Centenary Committee considered various concepts developed by Ivan Smith, the WIA's graphic designer. In recent years Ivan has been developing much of the Institute's new material with major projects including the Foundation Manual and recent WIA callbooks. Ivan's concepts were short listed, resulting in a number of draft designs, with the final logo design being selected and finishing touches applied.

In milestone celebrations like the centenary, a distinctive logo often plays a key role in branding and marketing. Those who remember the WIA 75 celebrations will recall it had a commemorative logo that featured everywhere.

In line with a brief for this new logo, Ivan has created one that boldly proclaims the 100 years while incorporating the current WIA logo.

It captures a sense of the on-going influence of WIA into the future as the national organisation representing Australian radio amateurs. Ivan



WIA Centenary Poster

WIA Centenary Poster

The WIA is proud to release the WIA Centenary poster created to help promote 100 years of organised amateur radio in Australia. The imagery in the poster tells much of the history of radio. There is much more to it than may first be obvious, spend time to study the detail to explore the rich history of amateur radio in this country. Those pictured on it are some of the founders of the Waverley Amateur Radio Club of New South Wales.

The poster is full colour A1 size and ideal for use in public displays. The WIA will be sending Centenary posters, along with some new Calling CQ posters and Calling CQ brochures, to each affiliated radio club.

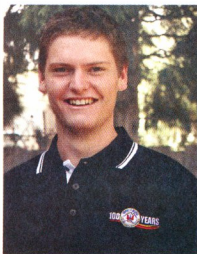
Members will also be able to purchase copies of the posters for their shack; they will be on sale in the 'merchandise' section of the WIA online bookshop.

Centenary merchandise

To help members celebrate the WIA Centenary, a range of 'limited edition' merchandise is to be available through the online bookshop on the WIA website.

The range sporting the WIA commemorative logo already includes jackets, vests, business and casual shirts, polo shirts, caps and hats and a WIA lapel badge. It is being expanded to include other commemorative items.

Members are encouraged to keep an eye on the website for the latest products.



WIA Centenary Polo shirt

Historical Articles

In the August issue of *Amateur Radio* the WIA Centenary Committee published a call for historical articles for publication during next year's celebrations.

Valuable material has been received from Rex VK7MO, Christine VK5CTY, Deane VK3TX, Walter VK6KZ and Justin VK7TW.

The Committee is still looking for more material, and is looking for further material to preserve our history and to record something about an event, a club or outstanding amateur. And, says Peter Wolfenden VK3RV, Centenary Committee member coordinating this aspect of WIA's Centenary Year, what about something about the future?

Please send your contributions to Peter at the WIA office or by email at centenary@wia.org.au

describes it as having "a warm and inviting feel, an energy and vibe against white and black backgrounds as well as the gold theme colour for posters and other printed material."

The master logo has been created in a vector format, thereby making it infinitely scalable to any size without losing detail. It has been made available in a range of formats suitable for print, the web, embroidery for clothing, as well as much smaller sizes such as was required to create the centenary lapel badge.

The many applications and uses of the logo are all part of the branding or uniform identity for centenary events and activities.

Our commemorative logo, along with usage guidelines and style guide may be downloaded by members from the new centenary section of the WIA website under the news and events menu. Members may include the logo on their QSL cards and websites, simply ensure adherence to the usage guidelines. The WIA holds the copyright of the logo, and commercial use is not permitted unless written permission is obtained from the WIA.

Foundation Corner Two

The half wave dipole

Ross Pittard VK3CE

vk3ce@amateurradio.com.au

Following on from the first edition of this column, I thought we might look at a basic HF antenna for those just starting out. If you talk to ten radio amateurs you will probably get ten different antenna recommendations. This is because your antenna is probably the most important part of any station and a great deal of experimentation is always carried out on antenna designs.

I have found that one of the simplest antenna to build is the half wave dipole or inverted vee, suitable as a home base station or portable antenna; it is easily made from hardware store odds and ends.

As modern solid state rigs are designed to work into a 50 ohm load and, just by chance, our inverted vee antenna has a theoretical impedance of 50 - 75 ohms, once cut to frequency we can use this aerial without the need of an antenna tuning unit (ATU).

Another advantage of the inverted vee is that a number of dipoles for

various frequencies can be fed from a common feed point. At my home station I have an 80 m, 40 m and 20 m dipole all fed with a common feed line and balun.

The 40 m dipole can be used as a 5/8 wavelength antenna on 15 m thus providing a useful HF multi band antenna set up for the popular bands.

To calculate the approximate antenna length I suggest using the formula from the Foundation Manual, page 98:

$300 \times 0.95 / \text{frequency in MHz} = \text{length in metres}$

For example an antenna cut to resonate at 7.1 MHz would be $300 \times 0.95 / 7.1 = 40.140 \text{ metres}$

Remember that this is the total length end to end and we will need two pieces of wire approximately 20.070 metres long for each side of the dipole. It is always a good idea to leave these longer than calculated as extra length can be trimmed or folded back on itself once tuning is completed. If the antenna is to be installed as an inverted vee, the tuned length will be slightly shorter than calculated.

The best type of wire to use is 'hard drawn' copper wire; this has not been

annealed (heated) after being drawn, it is stronger, but less flexible than 'soft drawn' wire used in electrical building cable.

If using building or earth cable, be aware that it will probably stretch over time and you may need to re-tune your antenna after a few months. Both types are available from electrical merchants and can often be found second hand at hamfests.

The centre feed point mounting for the antenna can be as simple as using a spare insulator, but it is always good practice to have a balun at the feed point to reduce the likelihood of RF currents on the outer of the coax. A simple choke balun can be made by coiling 8-10 turns of the feed coax in a loop about 150 mm in diameter as close to the antenna as possible and secured using a couple of black cable ties.

When setting up the 80 m dipole you will only be able to get a good match over a small portion of the band and it will be necessary to use an ATU if you want to use the entire band; on 40 m and above a dipole will be useable across the entire band.

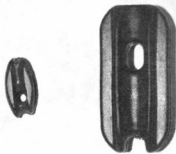


Photo 1: Example of commercial insulators.



Photo 2: The 80 m dipole electric fence insulator (complete with cobwebs).

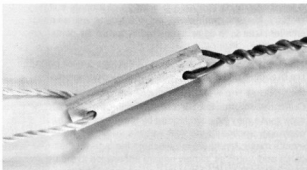


Photo 3: The homebrew PVC insulator.

If building the multi-band version I suggest tuning the lowest band first and progressively move up in frequency adjusting each set of dipoles as necessary.

There will be a little interaction between the dipoles and it is always a good idea to go through the tuning process a couple of times. Once you are satisfied with the SWR tie off the ends of each dipole by folding any excess wire back onto itself. Refer Photo 3.

There is usually a good supply of used ceramic and plastic insulators (refer Photo 1) available at hamfests but living in the country I have an inexhaustible supply of electric fence insulators (refer Photo 2) available at the local stock and station agent.

Insulators can also be made out of a scrap piece of PVC conduit cut to length (refer Photo 3) and two sets of holes drilled at each end. Conduit in various sizes can be obtained from most hardware or electrical suppliers.

This is a really useful antenna for portable field day and emergency use (refer Photo 4) and can be stored in

the boot of your car and erected from a near-by tree in a couple of minutes. The half wave dipole will out-perform any mobile vertical antenna.

Do not forget, if you have something suitable to publish, feel free to submit it direct to the Editor or to me, and I

can collate the material for inclusion in the column.

That is it for this month, next time we will construct a simple choke feed with a centre support for your newly made dipoles.

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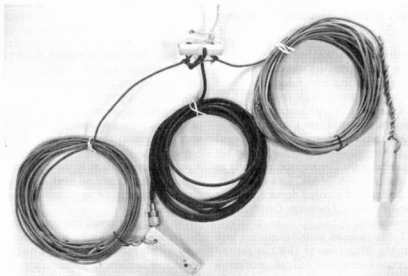


Photo 4: The portable 40 m dipole using homemade PVC insulators.

TET-EMTRON

Antenna Manufacturers

New Tet-Emtron Vertical Range

- All Aluminium with Stainless steel hardware.
- No adjustment needed to main antenna.
- Light.
- Free standing—no intrusive guy wires.
- 1 kW PEP power rating.
- Can be ground mounted or elevated.

The new TET-Emtron Vertical range is designed with ease of use in mind. Tuning is done by the radials when the antenna is in its final position (where possible). The radials can either lie on the ground, be buried or hang from the elevated antenna. The antenna comes with a set of radials that has a resonant radial for each band. Further sets can be ordered from TET-Emtron if desired.

See the web site for more info and a complete dealer list.

40 Blackburn Street Ph: 61 3 5145 6179
STRATFORD Fax: 61 3 5145 6821
Victoria 3862 AUSTRALIA ABN: 87404541761

www.tet-emtron.com

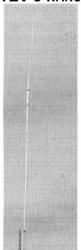
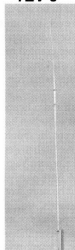
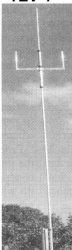
Email: rawmar@hotmail.net.au

New Tet-Emtron Vertical Range

TEV-4

TEV-3

TEV-3 WARC



Antenna	TEV-4	TEV-3	TEV-3 WARC
FREQUENCY	7, 14, 21, 28 MHz	14, 21, 28 MHz	10, 15, 24 MHz
ELEMENT HEIGHT	4000 mm	3800 mm	5025 mm
FEED IMPEDANCE	50 ohm	50 ohm	50 ohm
Max. RADIAL LENGTH	10.7 metres	5 metres	7.5 metres
SWR	1.5 or less	1.5 or less	1.5 or less
POWER RATING	1 kW	1 kW	1 kW

"A ghost town called eighty": Mentoring on air may just be the answer

Michael J. Charteris VK4QS

One of the best things about hindsight is the opportunity to consider how we might have done things a little differently in the past. Thus to avail ourselves of opportunity in the present is to look forward to where we want to be at sometime in the future.

I will start this article by stepping back in time some twenty-six years ago to 1983, when I was first introduced to amateur radio. I had previously been an avid SSB DXer on 27 MHz, with contacts to most parts of the world, and I loved it.

My adventures above the legal frequency allocation saw me land in hot water with the Department, resulting in a visit from the "MAN" for a quiet chat. With renewed clarity I decided to study for the Novice Operators Certificate of Proficiency.

I was assisted in this daunting task by Mr. Stan Graves (SK), a retired electronics engineer, full call, gentleman and mentor. Months of hard study followed on subjects I had never heard of before. But I knew I had to grasp them to join the respected ranks of amateur radio. Finally in May 1983, after nearly six weeks of anticipation, a letter arrived to advise me that I had successfully passed both the Theory and Regulations, and was now permitted by the government to commence amateur radio activity. This changed my life forever, and up to this day I am so grateful for every opportunity that amateur radio has granted me, both socially and in my working life. I can only hope it does the same for you in your life as well.

Having an amateur radio licence also changed the way our suburban backyard looked. Firstly, up went the dipole on 80 metres, then a 20 metre high tower which was followed by a 5 element Yagi for the 15 metre band. The best part was that my new tower could be seen from most points of our little suburb.

It was now time to put into practice the few skills I had learned over the previous six months of study. I knew no-one on the amateur bands, apart from the local hams in Maryborough, who were always willing to offer advice and a friendly chat on related subjects. I can say though, that I did not feel as if I had joined a society of strangers; I never felt cut adrift to wander

the bands alone and unassisted. Rather I was embraced by a new family, guided with their advice, and nurtured with good humour and operating skills.

The place where most, if not all, this activity occurred was on the busy, but very communal 80 metre band. Each night as the stars came out, the band would literally fill with the buzz and hiss of stations from all over Australia chatting in pairs, or in groups as part of a net.

The thing that struck you was that no matter how busy it was, it was still a very orderly radio society. There was no vindictive sarcasm or name calling, no button pushing, carrier dropping, music playing or any of the bad behaviour that has penetrated our bands today. As one would expect there was rather a healthy respect for the fact that the amateur radio licence, once achieved, was in fact a privilege, not a right to be abused.

Sure there were issues to be resolved when I first arrived on the bands as well, but results were achieved in a far more gentlemanly manner than outright abuse. These days if you can't get your own way and the verdict does not suit you, just revert to swearing, an age old cure for everything, or pursue the other station with abuse wherever he goes.

From memory when I first started, the majority of the conversations being conducted were of a technical nature to do with amateur radio. Depending on who you listened to, you could learn about antennas, catch up on the latest DX workings on the bands, or who was restoring a piece of WW2 equipment.

Subjects such as the progress of someone's latest receiver or transmitter project were always good value. I now knew I had come to the right place to soak up as much knowledge as I could from other experienced operators. Best of

all this knowledge was freely available no matter if you were a novice or full call. All you had to do was ask, and sure enough an experienced amateur would take the time to speak to you, and answer your questions as best he could. This was the pathway to enlightenment, the sharing of knowledge by way a medium known as radio fellowship.

Another phenomenon that I well remember was the "Holding of Court" by a two letter full call of great experience. This would see a group of novice operators in deep conversation with the full call on many and varied subjects. The goal was the understanding of concepts that the novices had read about but did not quite grasp. The full call was an obliging chap, who would guide each novice through the ins and outs of his query. Thus the novice operator would come away with a greater understanding of that which had perplexed him.

The thing that struck you was that no matter how busy it was, it was still a very orderly radio society.

The best part was that every other novice in the group benefited, as well as all those who were listening on frequency. I should probably mention that when I first got my licence, I was a little apprehensive to actually join some of these groups as "full calls" were almost like Gods. They seemed to know everything one ever needed to know from antennas to building your own station. They embodied a wealth of knowledge, freely available to anyone willing to ask for it politely. One of the greatest benefits of all this was the friendly banter that saw amateurs from different parts of the country who had never met each other before, become the best of friends.

A lot of full calls that I did eventually speak to, were in fact retired gentlemen, engineers, or technicians, plus those who were just as keen as myself to learn what there was to learn. A greater number of them had served in World War

II, had been licensed in the 1930s and had generally been there and done that. Such operators had near on fifty years of experience in many technical fields as well as in amateur radio. Sadly today as we move forward into the 21st century their valuable numbers dwindle by the day as these men approach the eighty to ninety year bracket. A generation of history and experience is quickly fading from the picture of our great hobby.

The question for every current ham is who will fill this void. More to the point, what will our future generation of radio operators be like? How can we learn from the past to assist these new operators with good operating skills and a desire to pursue excellence?

One of the most blatantly obvious examples of an ever dwindling active population of amateur radio operators is the state of the eighty metre band most any night of the week.

The silence is deafening my friends, absolute white noise, hiss and crash, void of both voice and Morse. Yes, and I do have a very good antenna for the band; a one wavelength full wave loop. My pleading question is where are all the full calls, where are all the technical conversations, where are the little groups of learning, and where are we headed.

In these times of low sunspot numbers the DXing is a little hit and miss on our bands. But good old 80 metres is like a faithful friend. It is up and ready to go when the stars come out most every evening with the promise of working all states in Australia if not New Zealand. The 80 metre band represents the heart of local nightly HF amateur radio activity in Australia. And from what I have heard over the past couple of years, the band is flat lining.

The 80 metre band, where once the population thrived when the sun went down, is very close to becoming a ghost town of past call signs that filled this band with expectation of better things to come. It was a nursery for those striving to advance their knowledge, to learn what was required to pass the next level in amateur radio.

It seems that once the weekly 80 metre nets are finished everyone is on the last train out of Dodge City and that is it for the night. This is probably highlighted by our very busy lives these days. Not to mention the influence of the internet, computers and television. We are, though, very fortunate to have the 'Foundation'

licence as an opportunity for motivated members of the public to undertake study to become a foundation level licensee, to see if amateur radio is for them as a hobby. This is their chance to dip their toes in the water. It is purely my own opinion that one of the best ways we can help these new operators is to encourage them to activate the eighty metre band nightly. We all need to make an effort to get up on 80 metres and to communicate with as many "F" Calls and Standards as we can. We need to create, as of old, groups of technical discussion, be it about antennas, crystal sets or simple transistor/chip sets as construction projects. At the Ipswich and District Radio Club we have set aside a night of technical development for any members of the club. Thus far about five of our Foundation licensees have completed their crystal set project and are now moving on to a FET receiver. At first, they thought the crystal set too simple a project, until I asked them to explain to me electrically how it actually worked... Now they know how it works because they have built one, and it has been explained to them electrically.

Radio mentoring nets

One possible solution to our dilemma, if supported by clubs, groups and individual operators, would see the formation of radio mentoring nets to conduct on-air training. It could be as simple as individual operators calling "CQ mentor net", and being willing to answer questions from a check-in list of "F" calls or Standards. It will require operators who are prepared to give of their time in order to run such nets for the benefit of others. If everyone on such a net had, say, Fred Swainston's wonderful Amateur Radio Theory Handbook, then questions could be asked each week, after reading the chapters one by one as homework. The discussion by way of net control could explain the finer points to the net on hand to grasp concepts.

Perhaps you or your club could contact all the "F" Calls in your area, set a time, and see about them all purchasing Fred's great book. Get them to read the chapter for a week and then discuss it on air under the guidance of an advanced call "net controller". It may take more than a week to read the chapter, and more than a night to understand the concepts. But in the end, if we as a radio community undertake to give it a go, then the benefits will far outweigh the alternative of never

having tried at all.

It needs to be stated that with the modern community we live in, the backyard is not what it used to be. Neighbours tend to frown at 'unsightly' antennas springing up to offend their view. Finally, I can only encourage you to the fullest to undertake the journey that amateur radio can take you on to change your life, your outlook and your future employment prospects. The Foundation licence for some will only ever be as far as they go. It still allows them to enjoy our great hobby just as much as other operators. For many others it can be the beginning of a new life, a chance to move forward to the Standard and then to the Advanced licence in time.

You never know, such a move could see you change your employment to work in the electrical industry. From my own experience, amateur radio has seen me work in the electronic retail industry, sail to most countries in Asia with the Royal Australian Navy, and these days, to work as a systems electrician in the Railways. This was all possible because some twenty-six years ago I studied for, and passed my amateur radio operator exams. I hope your journey is as interesting as mine has been thus far, and I look forward to speaking with you on air some time in the future.

At the time of writing, the VK Trans Tasman 80 metre contest has just been held. I was most impressed with the number of participants. It was heartening to hear 80 metres jam packed with operators, just like when I first kicked off on amateur radio in the 1980s. Yes it was crowded, yes it was difficult at times, and yes I am sure a lot of operators came out of the woodwork to have a crack, but boy oh boy it was great fun. Of particular note, was the number of Foundation calls banging away successfully making plenty of contacts. Maybe we need a couple more local VK/ZL contests to stimulate such wonderful activity as was enjoyed by all this past May 9 2009.

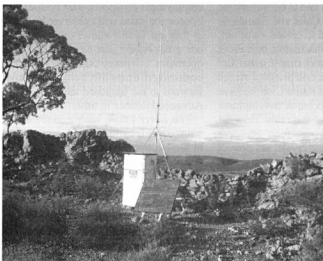
Thus, as I began this article, let me finish it on the same note, that we are all responsible for the future of amateur radio in this country. Let us not see the chance slip by to rekindle the fire that once it was. But rather grasp the opportunity to impart our skills and knowledge to others by way of good example, radio mentor nets, club activities and generally by good operating 'on air'.

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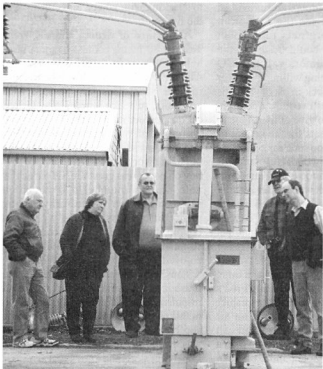
VK5

Adelaide Hills Amateur Radio Society

David Clegg VK5KC and John Elliott VK5EMI



One of the repeaters installed in the Gammon Ranges by Hank and his party.



July ETSA Museum Visit. Part of the group inspecting a very serious circuit-breaker.

(ETSA is the Electricity Trust of South Australia).

Our regular contributor, Christine VK5CTY, is far away in Svalbard. The SYLRA (the Scandinavian equivalent of ALARA) is hosting a DXpedition to that remote island, and Christine, a keen and active ALARA member, is no doubt having a wonderful time with her overseas counterparts.

Dr Hank Prunckun VK5JAZ spoke at the August meeting of AHARS, outlining his involvement with 'Operation Flinders'. This is a project where 'at risk' young people spend eight days walking 100 km in the bush around Angepena Station, near Leigh Creek. Hank was instrumental in setting up a VHF and UHF repeater network to provide safety and tracking coverage for the groups. A radio link back to Leigh Creek was also included in case emergency medical help was needed. Thank you, Hank for your most interesting presentation. After the business meeting and supper a mini auction was held, with proceeds going to the club.

September 12th was the local VK5 Clubs' Conference, with good support from AHARS. WIA National President Michael Owen was present to discuss national issues with us. September 13th was the club annual Hamfest and Buy and Sell event. Expect a full report next month.

The September meeting speaker is Tony VK5KAT. Tony will talk on designing a broadcast service starting from the desired signal strength back to the transmitter.

November is the traditional Construction Night. Graham Dicker VK5ZFZ is putting together a kit for a two tone oscillator, built on a commercially made PCB. These construction nights are very popular with members.

Correction to photo caption: The correct identity of the gent in the background of the top photo in the August 2009 AR is Greg VK5ZBD.

Radio Amateurs Old Timers Club of SA

The

Annual Luncheon

will be held on

Thursday 22 October 2009

12 noon for 12:30 lunch. Please bring your Seniors Card.

Venue:

Marion Hotel

Marion Road, Mitchell Park

Public transport Bus M44, Stop 24.

RSVP to one of the following committee members before 20 October 2009:

Secretary: Ray Deane VK5RK Phone: 8271 5401

Assistant Secretary: Ron Coat VK5RV Phone 8296 6681

Ray Deane, Honorary Secretary

Power generation 1919 versus 2009

Peter Wolfenden VK3RV

An inspection of PowerWorks and one of the Loy Yang power stations was included as part of the activities associated with the recent WIA AGM/GippsTech weekend.

The Loy Yang A station is one of a number located in the brown coal basin of the Latrobe Valley and generates about one third of Victoria's power requirements. All of the generators in the area contribute about 85% of the State's requirements.

The station we inspected has four 500 megawatt turbo alternators now upgraded and capable of supplying a total of 2100 megawatts. To generate this amount of power requires about 60,000 tonnes of brown coal each day for this station alone. Such requirements

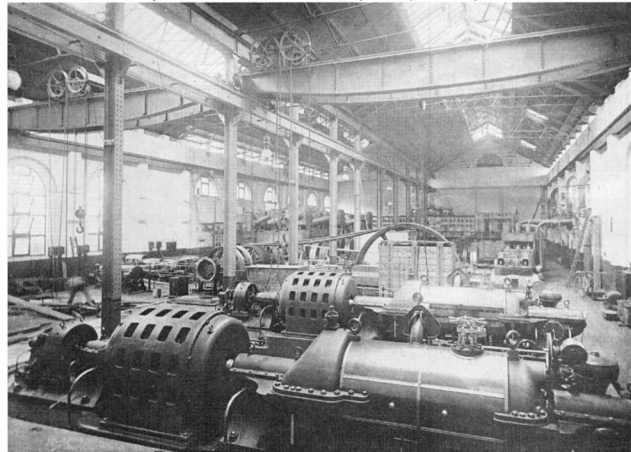
means that everything is BIG especially the bucket-wheel dredgers which are some 190 metres long and 50 metres high, totally dwarfing any dump trucks near them!

Contrast this with an inspection carried out almost 100 years ago by members of the Amateur Radio Society of Victoria when they visited the power station operated by the Melbourne City Council in Spencer Street.

This installation generated electricity for the central city and nearby inner Melbourne suburbs including Footscray,

Port Melbourne and Brunswick. These and other inner Melbourne areas were bulk supplied by the Melbourne City Council until the State Electricity Commission of Victoria came into existence and was in a position to take over supply.

It is also of interest to note that the City Electrical Engineer, Mr H.R. Harper, resigned and was appointed Chief Electrical Engineer for the S.E.C.V. in 1919. Both direct current and alternating current were generated at the Spencer Street station. DC was



A view of the inside of the Melbourne City Council Spencer Street Power Station in Melbourne, around 1910.
Photo from the author's collection.

Ed. Note: The station, since 1982 an asbestos and PCB ridden derelict eyesore, is currently being very carefully demolished.

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Tri band HB 35 C 10/15/20 m	\$844
3 ele 20 m beam, 4.8 m boom	\$514
7 to 30 MHz log-periodic Yagi/boom 13.8 m, 80 mm diam, longest ele 13.8 m	\$call
Log periodic 7 ele 13-30, 6.5 m boom	\$813
NEW 160 m Vertical SUBURBAN	\$355
M B Vert auto switch 10/80 m	\$345
40 m linear loaded 2 ele 6.4 boom	\$574
5 ele 20 m beam 40 foot boom	\$995
6 m 8 ele 12 dB gain	\$408
Top loaded 160 m vert	\$474
NEW 2 m/70 cm/10/17 elements Yagi beam antenna N-CON	\$261

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used in the central city area for a number of reasons including the minimisation of interference to the telegraph and telephone system!

At the time the Society members visited, the station was made up of a total of 5.1 MW direct current dynamos or generators and 4.6 MW alternating current machines. A newly installed 2.5 MW three phase turbo alternator was probably in the commissioning stage

and would have been of great interest because of its size!

References:

Loy Yang Power brochures.
Amateur Radio Society/ Wireless Institute of Victoria minute book 1911-1915. WIA Archive.
History of Electricity in Melbourne, Melbourne City Council.



One of the generator halls at Loy Yang A power station. Photo courtesy of PowerWorks and Loy Yang Power.



A view of one of the dredgers in the Loy Yang open cut mine, with the station in the background. The vehicles in the foreground provide an indication of size. Photo courtesy of PowerWorks and Loy Yang Power.

My G5RV dedicated coupler unit for 80 / 40 / 20 metres

Wayne Pickard VK2ACY

To my knowledge (despite the reams and terabytes already expended on discussion / argument / tutorial about the G5RV), nobody has ever designed a dedicated coupling unit just for this often misunderstood antenna. After exhaustively confirming absolutely no difference between my G5RV and (full-sized half wave centre and end fed) dipoles on 80 and 40 metres at my QTH, the decision to retain my G5RV as the primary antenna for these bands prompted my designing such a unit with fixed settings, providing replicable SWR readings (without even the need for me to check each time used).

My prototype used all second-hand parts, namely one HF toroidal balun core, 6 metres of 0.63 or 0.71 mm enamelled winding wire, 205 mm (8 in) of 19 mm (3/4 in) diameter wooden dowel rod, 300 mm (12 in) of hookup wire, 150 mm (6 in) of thin tinned wire, three small alligator clips – white, black and green, 2 only 680 pf 250 V ceramic / styroseal or similar capacitors, one SO-239 socket, two insulated banana terminal / binding posts, four small brad tacking nails, and two small self tapping screws.

All housed in an old MacKintosh's 'Quality Street'® candy tin with a handy swing lid, approximately 205 mm wide x 125 mm deep x 58 mm high.

Photos 1 and 2 show what I did and this is the order in which I did it:

Mounted the SO-239 socket in the middle of the rear panel of the 'toffee tin' and then mounted each of the insulated banana terminals / binding posts either side of it.

Cut two 610 mm (2 ft) pieces of the enamelled winding wire, and wound 10 turns of each parallel to each other (that is, side by side) tightly around the balun core, ensuring each of the pairs of turns tightly follows the outside / inside surface of the 'doughnut'.

I spaced the windings about 2.5 mm apart, ensuring that the 10 (pairs of) turns covered about three quarters of the doughnut's entire circumference.

Left about 50 mm (2 in) of winding wire at each end of the windings before cutting off the excess. Identified the 'start' and 'end' of one winding (primary winding), trimmed these close to the required length, and (using

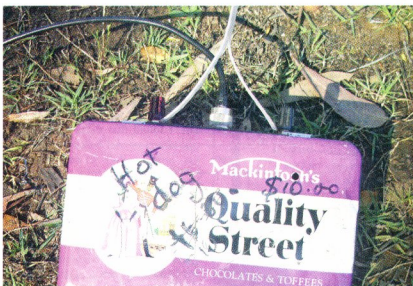


Photo 1: The Mackintosh's 'Quality Street'® candy tin coupler unit for the G5RV

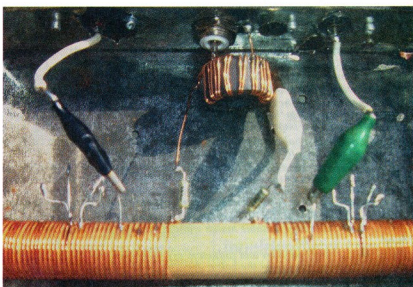


Photo 2: A look inside the 'candy tin' coupler, on 40 metres

a sharp knife) scraped enough enamel off the wire to permit tinning with solder and soldering directly to the SO-239 connections (the 'start' of the primary winding soldered to the centre pin, and the 'end' of the same winding soldered to the chassis / shield lug.)

Similarly scraped and solder-tinned the 'start' of the other winding (secondary winding) leaving it ready for soldering later as required. Also scraped and solder-tinned the 'end' of the secondary winding leaving only enough wire so that folded once over on itself it will form a 0.5 cm 'tab' which a crocodile clip could manage to grip firmly onto.

This 'end of winding' tab will form one balun connection which is selected by moving the appropriate 'crocodile clip' when using the antenna on the 40 and 20 metre bands. I labelled this connection to the balun 'Full winding tap for 40 and 20 m.'

Counting four whole turns back from this 0.5 cm 'end of winding' tab, a small area of enamel is scraped off the

top of the same wire which forms the secondary winding to enable solder-tinning and a small one cm tab of wire to be also soldered on at that point.

This one cm tab will similarly form another balun connection which is selected by moving the appropriate 'crocodile clip' when using the antenna on the 80 metre band. I labelled this connection to the balun 'Half winding tap for 80 m.'

Turning my attention to winding the required 7 uH tapped inductors, I hammered two nails into the dowel rod, each 13 mm (1/2 in) either side of the exact middle of its 205 mm (8 in) length, leaving only about 3 mm or so of the top of each nail exposed.

I then hammered one of the remaining nails exactly 63 mm (2 1/2 in) further out towards the left-hand end of the dowel rod, from the left-hand nail. Then I similarly hammered the last remaining nail exactly 63 mm (2 1/2 in) further out towards the right-hand end of the dowel rod, from the right-hand nail. I found that these nails formed

convenient anchoring posts for the enamelled wire about to be wound onto the dowel rod.

I then cut a two metre length of enamelled wire and scraped 25 mm (1 in) or so of enamel off one end to permit anchoring by wrapping twice around the left-hand nail closest to the centre of the dowel rod. After tinning / soldering it in place,

I then proceeded to tightly wind the wire around the dowel at a pitch of 15 turns per 25.4 mm (1 in), for a total of 37 turns, arriving just near the outer left-hand anchoring nail.

I temporarily held the end of the winding in place with tape while I cut the wire (leaving 25 mm (1 in) for scraping / tinning, anchor-wrapping and soldering around the nail itself.)

Once this was done I proceeded to repeat the exercise for the inductor to be wound on the right-hand side of the dowel rod, winding carefully and making sure that the direction of the winding was the same (that is, not counter-clockwise with respect to) the first winding I had made.

These two identical inductors would eventually be 'crocodile clipped' in series with each leg of my G5RV feedline, depending on the frequency band in use.

Counting from the very centre of the dowel rod (where the 'starts' of each inductor's windings are located) I carefully marked with Texta, at the 8, 17, 18, 19 and 20 turn points on each inductor, and proceeded to scrape a small area of enamel off the wire at each point to permit solder-tinning and attaching a small connection 'tab'

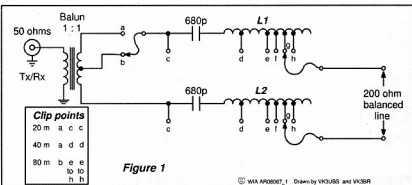


Figure 1: The circuit of the 'candy tin' coupler

So how exactly does my G5RV dedicated coupler actually work?

Very simply in fact – so much so that I did not feel the need to draw a circuit diagram for the completed unit; I could have built another one in the same amount of time!

The connection from the SO-239 socket is fed directly to the primary winding of the balun transformer. The balun performs the necessary 'balancing' in order to run the G5RV as a true balanced doublet, and also performs the necessary step-down impedance transformation when the 'Half winding' tap is selected during use on 80 metres.

From there, the two balanced balun connections each feed through a coupling capacitor and then an inductor winding on their way to the antenna feedline connections.

As the Q factor of the inductors is a medium-range figure on 80 metres, the useable bandwidth is limited to about 60 kHz, so a number of taps are provided, at 20, 19, 18 and 17 turns to reduce the inductance as higher frequencies in the band are used. The use of larger diameter inductors, say 100 mm (4 in) diameter would have negated this requirement, but made for a somewhat cumbersome sized unit to say the least; not to mention greatly increased cost.

On 40 metres the G5RV is a very broadband antenna, so the one set of inductor taps, at eight turns, more than satisfactorily provides a suitable match without the need to change, as higher frequencies are used further up the band.

On 20 metres the capacitors and inductors are by-passed and the balanced feedline connections simply 'clipped' onto the output connections from the balun operating in 1:1 mode. Measured SWR right across the whole 20 metre band was under 1.5 to 1 when operating the G5RV in this true balanced mode (as the reactive coax inductance does not come into play as it did prior to my using this unit).

(using very short pieces of the thin tinned wire doubled over) to which a crocodile clip could grip firmly onto.

At this point I breathed a sigh of relief because I knew that the unit was *just about finished*, and proceeded to mount the dowel rod on which I wound the inductors by screwing the two small self-tapping screws through the sides of the tin case and firmly into the ends of the dowel rod to prevent it spinning or moving.

The rod was aligned so that the nail heads and inductor taps were all facing the rear of the unit.

I then cut a short 50 mm (2 in) piece of insulated hookup wire and soldered one end to the inside of the insulated banana terminal / binding post on the left hand side of the rear panel, and the other end to the black crocodile clip. This could then be clipped to the appropriate winding 'tap' on the inductor closest to it, for the band in use.

Similarly, another short 50 mm (2 in) piece of insulated hookup wire was soldered to the insulated banana terminal / binding post on the right-hand side of the rear panel, and the green crocodile clip fitted to the far end, eventually allowing connection to the appropriate inductor taps closest to it.

Almost finally – taking one of the 680 pf capacitors, one lead of which was soldered to the left-hand inductor's 'start' of winding connection (at the central anchor nail), the other lead of the capacitor was then soldered to the balun's secondary winding 'start' connection (as mentioned above).

The other 680 pf capacitor was similarly soldered to the right-hand inductor's 'start' of winding connection (at the central anchor nail). A short 25 mm (1 in) length of insulated hookup wire with the white crocodile clip soldered to the far end was then soldered to the capacitor's other lead. This could then be clipped to the appropriate 'Full Winding' or 'Half Winding' balun connection required for the frequency in use.

Finally, after extensive testing including SWR measurements and on-air comparisons, I was able to sit down and make the following chart to remind me of the 'crocodile clip' settings for each band of interest:

80 metre band: White crocodile clip connected to 'Half winding' tap on balun transformer.

- Black and green crocodile clips connected to respective inductor taps as per the following centre frequencies:
- 3.550 MHz, use both taps at 20 turns.
- 3.580 MHz, use both taps at 19 turns.
- 3.610 MHz, use both taps at 18 turns.
- 3.640 MHz, use both taps at 17 turns.
- Higher centre frequencies are available by tapping appropriately at the ascending rate of 30 kHz per turn. The worst case measured SWR was 1.5:1 in between adjacent turn/taps.

40 metre band: White crocodile clip connected to 'Full winding' tap on balun transformer.

Black and green crocodile clips connected to respective inductor taps at the 8 turns position, which covers the whole of the 40 metre band.

20 metre band: White crocodile clip connected to 'Full winding' tap on balun transformer.

Black and green crocodile clips are NOT connected to inductor taps, but rather (on 20 metres only) are each attached directly to the capacitor closest to them by clipping onto the capacitor's lead which is *not* soldered to the inductor rod.

So, there you have it. An afternoon's work and absolutely *no* financial outlay, resulted in an SWR of better than 1.4:1 across 80/40/20 and the knowledge that my G5RV is now operated as a true balanced doublet, with consistently up to 1 S point improvement, particularly on 80 metres.

PS: For the record, my G5RV was installed as a flat-top at a height of 7.6 metres (25 ft) and constructed with 15.5 metres (51 ft) of 1.25 mm enamelled wire per leg, fed with 8.5 metres (28 ft) of solid 300 ohm TV type ribbon feeder directly to the coupler situated on the ground, and 7.5 metres of RG-58 coax from there to the station's operating position. Estimated maximum power rating of the coupler built by me is thought to be around 200 watts PEP.

ar

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Greetings everyone,

TARC

Townsville IRLP Node 6444 is operational again after having a few technical difficulties, so if you want to have a chat to the Townsville Amateur Radio club members and to see what they are up to, or even to let them know that you are willing to assist in one of their various activities, tune in and tell them.

Some of the upcoming events that will be occurring are with BLUE VK4FBLU.

October 10th and 11th Bluewater Endurance Ride: Operators so far assisting VK4s ZZ, UCM, FTVL, ZM, FBLU and HSV. Contact Blue on telephone 47754184 or the Townsville IRLP node 6444 with an offer for support.

WICEN Net

WICEN Queensland holds a net every Sunday on 7075 kHz from 0830 (2230 UTC). If conditions are poor, the net moves to 3600 kHz

TRG

So far 2009 has been an extremely busy year, "radio active", for the Tableland Radio Group (TRG) – based on the Atherton Tablelands and Innisfail of Far North Qld.

The TRG enjoys the challenge of operating portable plus the joys of camping and has had quite a few trips so far this year. Earlier in the year saw several members travel to John VK4FNQ's property for some days, then trips to Koomboolmba Dam, Laura, Innott Hot Springs and Cooktown. We have taken part in the John Moyle Memorial Field Day recently as the most northern Australian

station operating for the International Lighthouse/Lightship Weekend – which we have done for the last five years. TREC have tried various antennas such as long wires, G5RV, inverted V, wire loops and mag loops, verticals and NVIS. Also have been multi band and multi mode on these trips.

Socialising is also important for the TRG and each morning members catch up via repeater VK4RBP for information on events, experiments and other news. And members regularly catch up for coffee mornings and visits to each others shacks.

TREC

Tablelands Radio and Electronic Club members provided communications support at the recent Far North Queensland Endurance Riders Association's "Pioneer Trek". A five day event conducted in chilly conditions and early 5 am start, TREC members conducted reliable communications during the daylight hours and spent the evenings with the warmth of an open camp fire. A time enjoyed by all, with good company.

Caboolture Radio Club

The Caboolture Radio Club would like to advise that their next AGM will be held on Saturday October 10, 2009 at 1100 AEST at the club house located at 169 Smiths Road Caboolture.

Plenty of off street parking and refreshments are available. They have been trialling a new repeater at Ocean View 146.625 MHz. Preliminary reports indicate coverage south to Boonah, west to Yarraman and north to Nambour, with most of Bribie Island a formality.

The repeater is EchoLink enabled (EchoLink node 314599) and there are plans to install Echo-IRLP on it in the

future (IRLP node 6898). Club nets are held on Monday evenings at 1945 AEST 146.625 MHz and generally go for three rounds.

Caboolture Radio Club also holds an 80 m net on 3.610 MHz at 1830 AEST which also goes for three rounds, check ins from VK2, VK3, and VK5 are common – all welcome.

RADAR

Rockhampton and Districts Amateur radio Club assisted in communications on 29th August when the Central Queensland Motor Sporting Club held a car rally at Byfield State Forest area, north of Yeppoon near the Central Queensland coast.

Eight radio amateurs assisted with communications. They were Ray VK4HOT accompanied by his wife; Leon VK4KLL; John VK4AHB; Leigh VK4YLW; Don VK4BY; Clive VK4ACC; Jack VK4JRC and Alex VK4FAMJ.

Organisation was on a fairly casual basis with tasks allocated on the day. Jack VK4JRC and Clive VK4ACC managed start and finish of the first rally section, while Leigh VK4YLW and Ray VK4HOT managed the start and finish of the second rally section.

Various road blocks were handled by John VK4AHB and Leon VK4KLL. Alex VK4FAMJ and Corey Parker assisted Clive.

Don VK4BY handled rally base control. The day started at 11:00 am with a briefing and allocation of responsibilities. High visibility jackets were issued to all check point operators.

The first cars started at 2:00 pm, and the rally stages continued until 7 pm that evening. Some difficulties with glare from the setting sun and lingering dust

caused delays where messages had to be quickly relayed from the stage check points to the rally base.

After the rally a BBQ was held at Red Rock camping area. Many of the assisting amateurs attended and were thanked by the rally organisers for their assistance. It was a good fun day out for everyone concerned, and all got to play radio in a useful environment, with a good dose of rally cars thrown in.

Ipswich and District Amateur Radio Club

Ipswich and District Amateur Radio Club has a newly renovated clubhouse. The club has its 80 m net each Tuesday night at 8:00 pm AEST on 3.585 MHz +/- QRM. All are welcome to join, so call in and say hello to VK4WIP and members. All amateur radio operators in the Ipswich area, be they members of the Club or not, are most welcome to drop in and say hello at the Clubhouse.

Meetings are on the 2nd and 4th Monday of the month. They look forward to seeing you at Denmark Hill.

And with their AGM being completed for 2009 the results of seats are as follows:

President:
Mike Charteris VK4QS
Vice President:
Glen Woodrow VK4FARR
Treasurer:
John Edwards VK4IE
Secretary:
Darrin Last VK4FVRX
WICEN Co-ordinator:
John Edwards VK4IE
JOTA Co-ordinator:
Mike Charteris VK4QS
Station Manager:
Rob Bryce VK4HW
Public Relations Officer:
Paul Weir VK4FPDW
QSL Manager/Librarian:
Simon Cantrell K4TSC
Contest Officer:
Paul Weir VK4FPDW

<http://ipswichdistrictradioclub.webnode.com>

Contact Mike VK4QS: empire1915@optusnet.com.au

SCARC

The Sunshine Coast Amateur Radio Club has been very busy recently. The club's antenna system has been revamped: in addition to the 20 m beam, we now have an all band vertical with a counterpoise with a remotely controlled antenna tuner, an inverted "V" also with a remote antenna tuner operating on all bands.

Most of the work has been carried out by Wayne VK4WS and Bill VK4WB with help from others at various times. Wayne VK4WS has also recently installed two new banks of deep cycle batteries with a solar panel charging system.

Warwick VK4NW and a band of helpers have installed a new 6 m antenna with more height giving an even larger coverage area than before, and are now in the process of relocating the spare 2 m repeater to a different site.

Leicester VK4ALH and Roy VK3GB activated the old Caloundra Lighthouse for the Lighthouse Weekend. Leicester had training as a Lighthouse Guide and gave tours to several visitors during the day.

A curious resident in a nearby apartment block enquired as to the



Now that's a portable antenna fixing point!

Fastened to the seventh story Caloundra penthouse balcony rail, it put out a very good signal.

Not the least advantage was the means of getting to the fixing point. Taking an elevator and tying off is a lot easier than slingshots over tree branches etc.

purpose of the activity, and volunteered an anchoring point, the railings on her penthouse giving the double bazooka antenna considerable height, and judging by the pile ups that occurred they were putting out a tremendous signal.

While Leicester and Roy were at the Lighthouse, Wayne VK4WS was setting up at the clubhouse ready for the RD Contest, and led a contest team consisting of Wayne VK4WS, Richard VK4RY, Kirsty, Trevor VK4FGTS, and Ces VK4FMOZ.

The contest gave some F-call licensees a crash course in contesting and they rose to the task with enthusiasm and are now eagerly awaiting the next contest. The club's two new HF sets and the new antennas proved they were up to the task, performing well. Wayne ran the equipment for the entire contest on the new battery set up and it all worked well.

Richard VK4RY attended the Lighthouse with Leicester and Roy for several hours before the start of the RD Contest and was found asleep in his car early in the morning, much to the amusement of club members attending the clubhouse for the third Sunday of the Month BBQ meeting.

The Wednesday meetings have been busy of late: the library is being revamped and all the periodicals have been sorted and catalogued under the guidance of David VK4JMR; the surplus books and magazines are packed and stacked with the rest of the clubs surplus equipment ready for Sunfest, our annual fundraiser: Hope to see some of you there.

Late News

RADAR (Rockhampton) Annual Dinner Friday 20th November, 2009
BARC (Bundaberg) Annual Break-Up Friday 27th November, 2009

Many thanks to those who sent articles in for this edition, I am sorry that not all were published, but it will be submitted in the following issue.

Until next time
Cheers,

ar

IPSWICH REPORT IS ON PAGE 38

Jamboree On The Air (JOTA)

Bob BristowVK6POP

JOTA is a large Scout and Guide event that occurs every year on the third full weekend in October. 2009 is the 52nd JOTA. Around half a million Scouts and Guides participate in this event, along with Jamboree On The Internet (JOTI) on the same weekend.

There is an increasing number of Scout youth members gaining their Foundation amateur radio licence, and they will be keen to talk on air.

JOTA this year is on the weekend 16-17-18 October, beginning and ending at midnight local time Friday and Sunday respectively.

The success of JOTA is largely due to the voluntary contribution of time, expertise and equipment by amateur operators. It is your input that helps to make this event a success. Without your help, it would be Jamboree OFF the air.

The following information is offered to help make JOTA successful:

- JOTA-JOTI is a Scout event, and the principal responsibility for the organisation and conduct of the event lies with Scout people. There is, however, nothing wrong with an amateur causing a Scout Group to become involved by offering to assist.
- It makes your task as the amateur on board easier if you take one or more licensed helpers.

- The Scout Group should provide the venue, organise and manage youth members, keep the coffee flowing and keep you fed and comfortable.
- Scout Leaders should have alternative activities on hand to occupy Scouts when they aren't engaged with the radios.
- If you need help putting up antennas and so on, don't hesitate to ask the Scout Leader for help. He may not want to be seen as interfering, so do ask for help.
- Be clear about the amount of time you are able to give.

Those are general guidelines, and there are other things to think about, however these can all be sorted with some dialogue before and during the event.

You can find information at www.scouts.com.au Select the 'International' menu item.

I wish you well in your JOTA experience in 2009, and you can rest assured that the young people will benefit from the weekend.



JOTA Calling frequencies

Please QSY off the calling frequency after establishing communication.

World CW calling frequencies (MHz):

3.570, 7.030, 14.060, 18.080, 21.140, 24.910, 28.180, 50.160

World voice calling frequencies (MHz): (Updated from 1 July 2007)

3.690 and 3.940,
7.090 and 7.190,
14.290, 18.140, 21.360, 24.960, 28.390, 50.160

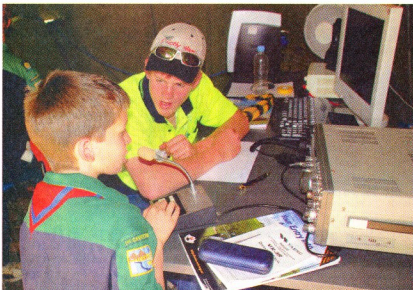
Australian voice calling frequencies (MHz):

3.650, 7.090, 14.190, 21.190, 28.590, 52.160

Calling frequencies for Slow Scan TV (SSTV) (MHz):

3.630, 7.033, 14.227

Calling Frequencies for PSK31 (MHz): 14.070



Scout Matthew, from 1st Cavendish, getting some air time under the guidance of Nat VK3NAT

Equipment Review

Yaesu VX-8R

Greg Williams VK3VT and
Ian Slack VK3FFLY

Yaesu have packed plenty of features into this 95 mm high, 60 mm wide and 24.2 mm deep package.

This is a triple band transceiver covering the 50, 144 and 430 MHz bands with general coverage receiver from 0.5 MHz to 999.99 MHz AM, FM and WFM. One feature that is obvious from the advertising is that this unit is waterproof (one metre for 30 minutes) and extremely rugged construction is employed, making it ideal for all sorts of outdoor work. The transmitter provides four power settings from 0.05 W to 5 W with the provided 7.4 V 1100 mAh lithium ion battery in FM mode; it also runs 1 W AM on the 50 MHz Band.

When this rig first arrived I did what most of us do, screwed the antenna onto the SMA connector and turned it on. That is when I became stumped; what I thought was the dial knob used to tune the rig to a frequency was behaving as a volume control. After some frustration I decided it was time to read the manual; sure enough by pressing the 'F' key followed by the 'VOL' key the dial knob reverted to the normal function of tuning. There are 26 controls, comprising 25 buttons and the one dial knob, on this rig and from my experience it does pay to read the manual – all 172 pages of it! The supplied antenna comes in two parts with the small extension piece required for 50 MHz operation.

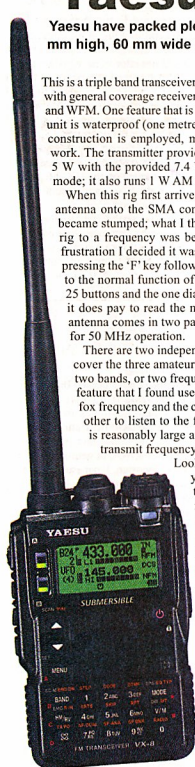
There are two independent receivers in the VX-8R and they both cover the three amateur bands. This means that you can receive on two bands, or two frequencies on the same band, simultaneously, a feature that I found useful on a recent foxhunt; once to listen to the fox frequency and the car liaison frequency at the same time and the other to listen to the fox and car liaison frequencies. The display is reasonably large and displays both frequencies with the active transmit frequency shown in larger characters.

Looking at the menu system in the VX-8R makes you realise just how sophisticated handheld transceivers have become. There are 111 menu items that allow selection of almost every parameter and setting. These range from which antenna to use for AM and FM broadcast bands (there is an internal bar antenna for AM broadcast reception), adjusting the display contrast and brightness, tuning steps, squelch type and level through to CTCSS settings and units to display the temperature and barometric pressure from the internal sensors.

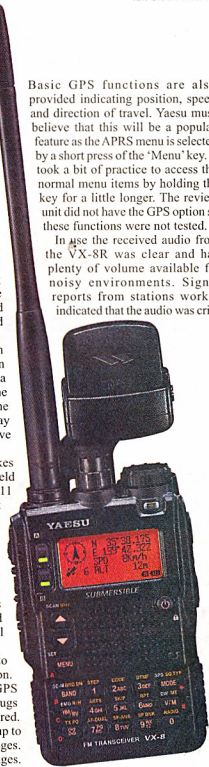
Another group of functions built into the VX-8R are aimed at APRS operation. To use these functions the optional GPS antenna that clips to the microphone or plugs into the microphone connector is required. These functions allow the unit to be set up to automatically send APRS beacon messages. The unit also receives APRS messages.

Basic GPS functions are also provided indicating position, speed and direction of travel. Yaesu must believe that this will be a popular feature as the APRS menu is selected by a short press of the 'Menu' key. It took a bit of practice to access the normal menu items by holding the key for a little longer. The review unit did not have the GPS option so these functions were not tested.

In use the received audio from the VX-8R was clear and had plenty of volume available for noisy environments. Signal reports from stations worked indicated that the audio was crisp



The Yaesu VX-8R



The Yaesu VX-8R with GPS attachment.

and clear and the deviation was OK. I regularly use my handhelds on foxhunts and decided to try out the VX-8R on a regular Melbourne two metre monthly hunt; during the 'sniffing' part of a hunt I must have bumped a key and the radio was transmitting silent carrier for a couple of seconds followed by a beep before opening the transmit audio.

This is extremely frustrating for the rest of the team in the car and other users of the frequency and I finally found I had turned on the 'Internet Connection Feature' which is a single key press. A quick press of the key and the problem was gone. This is where menu item 51 – the Lock function should be used! It should be noted that this is an easy thing to do on a number of other radios.

Memories! This radio is loaded with memories, 900 standard and 99 skip memories, 11 'Home channels', 50 sets of band edge memories, one emergency

channel, 57 VHF marine channels and 89 popular shortwave broadcast channels. Each channel can be given an alphanumeric name, probably a handy feature considering the number of them. The memories can be assigned to memory banks which can assist in organising them.

Scanning with the VX-8R has three modes – memory scan, scan a complete band or portions of a band. It can be programmed to stop for a selected time on a busy channel, stop on a busy channel until the channel is free and stop on busy and stay on the channel until the scan is resumed. Frequencies can be added to a skip memory so that scanning will not stop on them.

For those interested in learning Morse code, this facility is included. There are two modes, one to learn the characters and the other to improve speed; this sends five character groups at a selectable speed.

A basic form of text messaging is available on this and compatible Yaesu rigs – all members in the group have to have the same messages stored in the 20 message store and the same 20 stations in the member's list.

As I was conducting the review of the VX-8R and looking at all the features available I thought 'how would a newly licensed operator cope with a rig like this?' So I passed the rig over to Ian VK3FFLY who was recently licensed and had only operated a rig during the training and assessment sessions. So over to Ian for his comments:

I considered myself very fortunate to be asked to comment on the VX-8R as I have only very recently obtained my Foundation licence.

On opening the package my first impression was that the manual was very thick! I did however do the right thing and start by

Continued on facing page

SPOTLIGHT ON SWLing

Robin Harwood VK7RH

vk7rh@wia.org.au

October has arrived and also Daylight saving. NSW, Victoria, Tasmania and South Australia all commenced on the fourth of this month at 0200 Local Standard time. I am not sure if WA is still using it as I have a recollection that they had a referendum earlier this year and they may have decided to not have DST. Do not forget that many countries within the European Union and the former USSR revert back to Standard time on the 31st. Canada, the USA and Cuba change on 7th November.

I am sorry for unwittingly upsetting some readers in my column for August. I was voicing my comments on how fickle the media, both print and electronic, are when it comes to deciding what is important. It was not my intention to upset Michael Jackson fans about his tragic death. I was only commenting on the media perception of what is important and how they can quickly saturate the spectrum with what they consider is important. That is why I believe that there should be many voices and sources available to us, with a free dissemination of uncensored

information, allowing us to form our own opinions and comments.

One of the first stations I heard on shortwave, when I started out in the late 50s, was HCJB, the "Voice of the Andes" in Quito, Ecuador, South America. It was easily heard on either 11915 or 9745 kHz in English, broadcasting to the South Pacific. It may have been the first report I sent off and it went by sea mail, their reply taking over a year. One of their regular programs was "DX Partyline" and the ANDEX club with Clayton Howard and I joined in the early 80s. My number was #3645.

HCJB started off on Christmas Day 1931 and continued for over six decades and sadly ceased shortwave broadcasts on 30th September. What brought about its closure was the rapid expansion of Quito's International Airport and Pifo, the site for HCJB's senders, had to be dismantled. Also the shortwave audience had fallen with the rise of local electronic media such as FM and the Internet. HCJB has helped with the start-up of over 300 local stations worldwide. These are often low-powered.

HCJB may have ceased broadcasting on shortwave from Pifo but their programming continues from the UK in Arabic and German and also from Australia. They now have three senders in Kununurra, WA, targeting SE Asia in Hindi, Indonesian, Japanese and various Chinese dialects as well as English. It is on between 0730 and 0200, mainly in the 19-metre allocation. It is silent between 0200 and 0730.

I notice that the last Chinese broadcasting station has now departed the segment between 7100 and 7200. The last holdout was a station in Nei Monghu in Inner Mongolia on 7105. It also had a spur 10 kHz either side. That leaves Pyongyang on 7140 between 0900 and 1250. There is a carrier on after North Korea leaves and I have heard very weak modulation. The location is Yakutsk in remote Siberia and is only a kilowatt. The program is identical to that on 7200, which is Radio Rossi.

Well that is all for now and hopefully I have not upset anybody this time!

Do not forget you can email me at vk7rh@wia.org.au

ar

reading this first. I did need to check whether the unit was OK for my licence conditions. Yep, power output OK and right bands.

The manual had a clear picture and explanation of all the principal features. However the next page was a spreadsheet detailing all secondary functions for each key; my eyes did glaze at this point. Fortunately the next few pages could be described as 'Getting Started' and I was off.

Assembly was easy and physically the unit was comfortable to hold even for my relatively small hands. The PTT button and VFO adjustment fell neatly to hand (fingers actually). I did find that I was unsure as to whether I had pressed some of the other buttons as the water resistant rubber covering gave me a loss of feel.

The display was both clear and very informative. Band selection was very simple as was frequency. The scanning function was great as I was able to find a couple of club nets that were active on the night and I had a great listen. Later contacts showed no problems with speaker and microphone.

Further reading of the manual revealed that there were 111 Menu items! It was not until I got to the 'Miscellaneous' section that I found a solution to one of my earlier concerns re button usage. I was able to increase Button Beep Volume and this gave me a positive indication of engagement. The more constant use of the menu button did highlight one confusing matter. A mishit, that is, too short, opened up the Auto Position Reporting

System! A quick search of the manual got me out of there but still quite confusing!

I was not able to experiment much further as the unit needed to be returned.

My overall comments are that the unit would do everything that I would want but I feel I would probably not use most of the menu functions for some time."

Many thanks to Ian for his assistance, and to Peter Brennan from Vertex Standard for supplying the review radio. In summary the VX-8R is a very capable, rugged radio that would make an ideal addition to any ham shack.

The menu selection may take a little practice to navigate quickly but with regular use I am sure one could get very proficient at selecting the commonly used functions.

ar

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VHF/UHF – An Expanding World

David Smith VK3HZ – vk3hz@wia.org.au

Weak Signal

David Smith VK3HZ

A high pressure cell drifting across northern Victoria caused some excitement as it turned northwards along the east coast. The expectation was for an early start to the DX season for trans-Tasman VHF contacts. While signals were heard, unfortunately no contacts were made.

Interestingly, it appears that two repeaters had a QSO of sorts. The VK4RKC Brisbane 2 m repeater has input on 147.3 MHz and output on 147.9 MHz. The ZL2VH repeater near Wellington has the exact reverse – 147.9 MHz in and 147.3 MHz out. For a period, conditions were such that, once triggered, the repeaters held each other open.

While the enhancement stayed too close to the east coast to give any real VK-ZL activity, it did provide some good propagation along the Queensland coast.

Starting at 2048 Z on September 12th, Ron VK4DD worked John VK4FNQ (1050 km), VK4AFC (1354 km) and David VK4ZDP (1306 km) – all at 5x9 and all on 2 m. Phil VK4CDI, Mick VK4NE, Wayne VK4NWH and Roy VK4ZQ were also in the mix working the northern stations. Conditions slowly dropped off as the morning progressed and at 2245 Z, Ron worked VK4MS (1184 km) at 5x2. By 0100 Z, conditions had died off.

The next morning, some enhancement was still present, but much weaker. At 2030 Z, David VK4ZDP worked VK4DD at 5x1 and Ron VK4CRO (1333 km).

VK-Microwave Group

A new email group – VK-Microwave

– has been established on Yahoo Groups to cater for Australian and NZ amateur radio operators interested in operation in the microwave bands from 23 cm (1296 MHz) upwards. Discussion subjects include home and field operations, equipment construction and modification, re-use of commercial equipment and other subjects related to amateur microwave activities.

For more information, go to: <http://groups.yahoo.com/group/VK-Microwave/>

Hopefully, this summer will see the bridging of the Tasman on 2.4 GHz and possibly higher (10 GHz?) as stations build greater capability on either side. And hopefully, this group can help to facilitate such an event. Just 10 days after being established, there are already 80 Australian and NZ enthusiasts registered on the site.

Aircraft Enhancement with a difference

I have mentioned before the Kinetic SBS-1 ADS-B aircraft receiver. There are a number of these set up around Australia receiving position reports from ADS-B-equipped aircraft and relaying the information to the PlanePlotter server to be used by registered PlanePlotter users.

ADS-B operates on 1090 MHz and normal range for a ground station in a good location is about 200 nautical miles (about 360 km). I have often thought that these receivers could perhaps be used as indicators of enhanced propagation conditions. The problem is that aircraft normally fly at 35,000 to 40,000 ft, way above the normal inversion layers.

So, if there is tropo enhancement,

what would happen is that the aircraft transmissions would be reflected up and away from the receiver and there would actually be poorer reception. EME operators have a somewhat similar problem when the moon is low in the sky with tropo enhancement deflecting their signal back towards the ground.

However, during the period of tropo enhancement reported in the previous section, the operator of an SBS-1 receiver in Brisbane reported receiving an Air New Zealand aircraft at a range of 772 nautical miles (1430 km). How could this occur?

If the enhancement duct only covered part of the path from the receiver out to a distance of say 1200 km, then the last 230 km of the path would be a non-enhanced area (for want of a better term). The signal from the aircraft could pass down through the non-enhanced area to a height where it could enter the duct and be propagated through the duct to the receiver. Judging by the reports of good propagation along the Queensland coast, but lack of contacts into ZL, then it appears that the duct may have only been close to the Queensland coast.

Similar conditions were observed several years ago where numerous meteor pings were observed in VK5 on JT65 digital signals from ZL3TY. The path is too long for meteor scatter, but there was an enhancement duct present over part of the path. Thus it seemed that the signal was travelling through the duct, exiting out the other end and then being reflected by meteors – a mode of propagation dubbed tropo-enhanced meteor scatter.

Please send any Weak Signal reports to David VK3HZ at vk3hz@wia.org.au.

Digital DX Modes

Rex Moncur VK7MO

In experimenting with JT65a at marginal levels on 10 GHz, it is very difficult to align the antenna just by beaming for maximum signal, particularly if one is waiting for the signal to just rise out of the noise. Optical communications techniques combined with techniques used in moonbounce have proved useful in optimising alignment and measuring system performance of a small 10 GHz portable station.

For non-line of sight optical communication one is often dealing with beamwidths of less than plus/minus one

degree and small 10 GHz portable dishes are not much wider. Such accuracies are difficult to achieve and the optical communication technique is to draw a line on Google Earth between accurately marked positions of each station and then look for some recognisable feature close to each end of the path.

The equipment can then be aligned on this feature in azimuth using a rifle scope that has previously been aligned. In elevation, alignment can be achieved to within 0.2 degrees with a good quality forestry inclinometer such as manufactured by Suunto or to within a degree or so with

cheaper units found in hardware stores.

The same techniques can be used to align a microwave dish, however, here we cannot see microwaves for visual calibration of the system. One approach is to align on a signal from a visible location but this is prone to errors due to ground reflections.

Another approach is to peak the receiver on sun noise and then set the rifle scope to this direction by centring the image of the sun which is made visible by using a thin sheet of paper covering the objective lens of the scope.

The weakness of this approach is that

it does not achieve the accuracy that is available using the adjustable graticule of the rifle scope.

While one cannot look through the scope at the sun one can look at the moon and align the graticule on its centre. Moon noise can then be used to calibrate the system. The azimuth and elevation of the moon can then be determined from programs such as Doug VK3UM's EME planner or K1JT's WSJT.

While moon noise is only about 0.1 dB on a small portable 1 GHz dish (around 65 cm), it is possible to get an adequate reading of moon noise using the broadband output of one's transverter.

Such measurements can be achieved with a power meter such as the HP432, or a Boonton power meter as used by Alan VK3XPD, or a home constructed unit as described by Charlie VK3NX at his web site below.

VK7MO and VK7TW have been using a modified Wiltron 501b level meter that gives a resolution of 0.01 dB by changing

the provided 500 micro-amp meter to 50 micro-amps.

http://www.vk3nx.com/files/Noise_Meter.pdf

Other units suitable for home construction are at:

<http://www.g3pho.free-online.co.uk/microwaves/noiseamp.pdf>

<http://lea.hamradio.si/~s57uuu/eme/noistrk.htm>

Once one has a suitable measuring system, this can be used in conjunction with Doug VK3UM's EME calc program to check system performance. Doug's revised version 6.05 makes provision for small dishes by allowing dish size to be set to the nearest cm. It is available at:

http://www.vk3bez.org/vk3um_software.htm

Using typical offset dishes as used for portable 10 GHz operations and a good pre-amp, sun, moon and ground noise to cold sky should be around the values for a quiet sun as shown in the following table:

Dish Diameter (cm)	Sun noise (dB)	Moon noise (dB)	Ground noise (dB)
65	3.5	0.1	2.7
85	5.0	0.17	2.7
120	7.1	0.34	2.7

In practice VK7MO and VK7TW have achieved 3.1 dB sun noise, 0.07 dB moon noise and 2.7 dB ground noise with a 65 cm dish, suggesting a slightly lower dish efficiency than optimum.

It is useful in the field to check sun noise to confirm system performance and to ensure nothing has fallen off or become misaligned during transport. If the sun is too high for the elevation range of your dish mount one can do a quick check between ground and cold sky. Sun noise is a check on the full system including antenna, where-as ground noise checks the receiver and pre-amp but takes no account of dish efficiency or whether it is in focus.

Please send any Digital DX Modes reports to Rex VK7MO at rmoncur@bigpond.net.au.

The Magic Band – 6 m DX

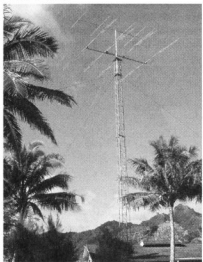
Brian Cleland VK5BC

August was very quiet on 6 m with very little activity and contacts other than via meteor scatter. The morning of September 1 though produced a surprise 'E' opening between 6.30 am - 7.00 am EST. Brian VK4EK at Saffire was attempting meteor scatter contacts into VK2 when suddenly there were S9 signals. Brian completed several contacts into VK1, 2 & 3 and also heard the VK5RBV beacon.

The past couple of summer E seasons, Paul A35RK in Tonga has been very active and has surprised many with contacts into all states of Australia and New Zealand via multi hop Es. It has been very clear if there were active stations in the pacific area many contacts would be possible via Es. Thanks to efforts from Bob ZL1RS this coming season should see activity from the Cook Islands. Bob ZL1RS reports:

Earlier this year I visited the Cook Islands (E51) with Lance W7GJ for a 6 m / 2 m EME DX expedition and holiday. Lance operated 6 m EME using an M2 6M8GJ Yagi and solid-state amplifier but over two weeks there was no ionospheric propagation on 6 m. When we met with Victor E51CG, he expressed an interest in returning to the ham bands... including 6 m.

In August I returned to Rarotonga to help Victor raise his tower and antennas, and thanks to Lance's organisational efforts I also delivered an IC-706 to Victor from Jim K8TS. Dave N3DB and "The Worldwide Beacon Project" team



The tower and antennas in place were to supply a 6 m beacon but a mess up in the courier delivery meant it did not arrive in time to also go in my suitcase.

Victor and I worked steadily for ten days preparing his tower and antennas, including making the W5WYO modification to Victor's Cushcraft A50-5S 6 m Yagi. The mod increases the boom length by 6 feet delivering 1.5 dB more gain and a better radiation pattern. The crane arrived and the 50 ft tower with rotator was lifted into position. Then the pre-assembled stub mast with refurbished KT34 HF tribander and modified A50-5S was placed on top... "job done" in less than 45 minutes!

Victor is now monitoring various beacon

and 6 m "indicator" frequencies, as well as the usual DX calling frequencies.

The 6 m beacon was on my doorstep when I got back to ZL and will be sent to Victor before the Es season starts. The beacon equipment is a modified VHF low-band RT with a small keyer board inside. When installed at Victor's QTH, it will be signing "E51CG/B BG08ct" with 20 W of CW on 50.051 MHz to an M2 "HO Loop" omnidirectional antenna.

I am also sending a 7-element 6 m Yagi for Warwick E51WL who will be active from Penrhyn atoll in the northern Cook Islands (separate DXCC entity). Warwick will install the Yagi at 50 feet on his existing tower and will run 100 W from his IC-706MKIIG.

Thanks again Bob, I am sure all VK & ZL operators look forward to being able to work E51 on 6 m.

News from the Tablelands Radio and Electronics Club in far North Queensland: John VK4FNQ reports hearing the VK4RHT beacon regularly and on 4th August logged the VK5RBV beacon. Ross VK4AQ reports that on 25 August between 0100 and 0140 Z he worked two JA stations on CW. On the 31st, Dale VK4SIX heard the BY TV video on 49.750. Bryan VK4NMC is getting active on the magic band from Herberston FNQ. The VK4RHT beacon on 50.281 MHz is still operating in test mode from Atherton and reports would be appreciated on the logger.

Please send any 6 m information to Brian VK5BC; briancleland@bigpond.com **ar**



International Lighthouse

Kevin Mulcahy VK2CB

Event Coordinator and Webmaster

This annual amateur radio event has opened up the world of radio operators, lighthouses and the public to a new level of international goodwill, lighthouse

Keepers world wide open-day traditionally held on the Sunday with lighthouses open to the public some with celebratory events such as BBQs, feasts and games etc.

The ILLW is in its 13th year having commenced its existence in Scotland in 1995 as the Northern Lighthouses Award for amateur radio operators. In 1997 it became an international affair and has grown each and every year since.

This year saw a 10% increase in submitted entry forms which can be viewed on the web site <http://illw.net/> Alaska was a first this year with an entry for Sentinel Island. Germany listed 55 lighthouses, Australia 49, USA 47, and England 43. Malaysia celebrated their Lighthouse Weekend with nine lighthouses taking part.

The Azores, Balearic Islands, Egypt, Slovenia, Panama were some of the smaller countries represented with one entry from each.

Some ask us what the connection is between amateur radio and lighthouses. In a word, "communication". Lighthouse keepers communicated with ships via flags in the early days, then radio in later years. Most lighthouses have a flag pole with a cross bar near the top for signal flags. Some even have a small building near the flag pole for storage of flags. Semaphore was another mode of communication as well as Aldis lamps. The lighthouse weekend aims to keep the memory alive of those men and women who maintained these navigation aids sometimes in terrible conditions. It is also an aim of the weekend

ILLW: Waverley Am

This special QSL card is being produced to mark Waverley Amateur Radio Society's Lighthouse activities as part of the club's 90th year celebrations.

Club members activated three sites during the International Lighthouse/Ship Weekend.

Macquarie Light at Vaucluse is the oldest lighthouse in Australia and has been a regular part of Waverley's calendar for the past several years.

This year it was decided that it would be a fitting occasion to add the two other



Report from Grassy Hill Light -Cooktown

Sixteen amateurs with families enjoyed reasonable conditions - the first time in five years that it wasn't blowing hard!! The group had good contacts in Australia, New Zealand, Malaysia, China, Russia, Finland and USA but the previous openings into Europe didn't happen this year. We also experienced rapid and deep fades on 20 metres which was frustrating as we heard stations calling but we couldn't get back for example, East Timor and Spain to name but two. Overall the contact with 33 other lighthouses was satisfying.



e/Lightship Weekend August 2009

once again brought amateur radio together again to promote lighthouses and amateur radio.

to bring to the public's attention the plight of some of these beautiful structures some of which have been neglected and vandalised over the years through lack of use and supervision.

The Ayr Amateur Radio Group, the sole organiser of the ILLW, sincerely thanks all participants who have supported the event this year and in past years.

Without this support the event would not be the success it is. An indication of this the web site shows 10 entries already received for 2010. **BF**

More ILLW reports appear in 'News From'

Amateur Radio Society

Laurie Gordon VK26Z

Sydney lighthouses in the club's area.

Hornby Light on the tip of Sydney Harbour's South Head and Endeavour Light on the northern cape of Botany Bay completed the trifecta.

Operating hours were restricted at each site, with Hornby and Endeavour requiring gear to be carried in by hand. One of the club's youngest members, David VK2FHDK, made his mark as the only operator to make contacts from all three lighthouses over the weekend! **BF**



Table Cape

Wayne Hays VK7FWAY and Eric Edwards VK7FEJE

Table Cape Lighthouse is just to the north west of Wynyard, perched 150 metres above sea level on steep cliffs overlooking Bass Strait. It is an excellent radio site with good views in an arc of 180 degrees from south east to the north west.

Early Saturday morning Wayne VK7FWAY headed up to Table Cape Lighthouse with his truck come radio shack, plus all the antennas and masts. By the time myself (Eric VK7FEJE) and Vernon VK7VF arrived, Wayne had all the antennas up and running with only a small amount of testing to do.

After contact with Winston VK7EM at the Mersey Bluff Lighthouse at Devonport, and Bill VK7MX at Low Head Lighthouse, everything was ready for a great weekend of contacts with other lighthouse stations.

During the day several club members from the Cradle Coast Amateur Radio Club visited to offer assistance, which was greatly appreciated. During this period lots of contacts were made around Australia and New Zealand, using both the club callign (VK7TNW) and our own Foundation calls. After most people departed late in the day, Wayne and I settled down to working some stations and lighthouses in the northern hemisphere.

It was not as cold as last year and we worked much later, calling it quits about 1:30 am to rise again at 5:00 am and check on other stations on the eastern seaboard to see how they fared during the night, especially the VKs who, like us, suffered from strong winds throughout the night.

Early on Sunday the strong winds and thunderstorm cells appeared out of nowhere, and as our antennas were very exposed to the strong non-westerly winds, at about 10:30 am we pulled down the G5RV and the HF squid pole.

A quick word was passed on two metres to Winston at Mersey Bluff Lighthouse to be aware that strong winds, thunder and lightning were on the way towards him from the west, so he could take action if needed.

Then it was just a matter of packing up, heading for home for a quick shower and much needed rest so we can plan again for next year. Cheers from Wayne VK7FWAY and Eric VK7FEJE.

Wayne VK7FWAY and Stephen VK7PWWP inside, and an outside view, of the truck-mounted portable radio shack at Table Cape Lighthouse.



News From

Tim Mills VK2ZTM
arnews@tpg.com.au

VK2

It is interesting the number of VK2 radio clubs celebrating anniversaries. This time it is the **Orange & District ARC** who turn 50 next year. Vice President Bruce VK2DEQ reports that at the recent AGM of the Club, two long serving members Robert VK2ZRJ and Peter VK2ETK were presented with Honorary Life Memberships. (See Box)

Members and friends of the Orange & District ARC are encouraged to meet on the 2 metre FRED net conducted each Sunday morning following the VK2 broadcast. Operators are reminded that the new FRED frequency is 147.025/147.625 MHz.

The Orange & District ARC meet on the first Friday evening of the month at 7.30 pm at 64 Warrendine Street. All are welcome. Further information about the Club and its activities are available from the Secretary, PO Box 1065, Orange 2800 or at www.odarc.org

The **Blue Mountains ARC** conducted a very successful Winterfest at their new meeting location near Penrith in late August. Over 300 attended on a fine winter day. Several club members have also just completed a DXpedition to Poeppel Comer, the junction point of VK8, 5 and 4.

It is now about three months until Scouting Australia's next Jamboree which is being held at Cataract Scout Park (south of Sydney). The event is referred to as 'AJ2010'. The site has a permanent amateur radio facility and the **Fishers Ghost ARC** is its caretaker, advises Wal VK2ZWK.

They are preparing the site and making some modifications to the shack. Many clubs have already offered assistance for operating during the day from January 4 to 14, 2010. The FGARC will provide the evening operation. If you can help during the day or need more information contact Wal at vk2zww@wia.org.au or by telephone 02 4626 8423.

A reminder that the **Wyong Field Day** is getting closer on 28th February 2010 and provision has been made to fit in more "Flea Market Stall Holders" advises Ray VK2HAY. Contact the **Central Coast**

ARC if you require to book a space.

While on field days, there is the Radio Expo in Coffs Harbour on Sunday 17th January 2010 hosted by the **Mid North Coast ARC**.

The **Hornsby & District ARC** will have exams at the end of this month at Waitara - Saturday 31st October.

The **Manly Warringah Radio Society** have moved again to a new location. The 1st Terrey Hills Guides Hall in Beltana Avenue, Terrey Hills. They meet on Wednesday evenings.

Waverley ARS conducted exams last month, a regular event in Sydneys eastern suburbs. This year they are celebrating their 90th.

Hunter Radio Group paid a visit to the **Kurrajong Radio Museum** recently. The Museum's operator Ian VK2ZIO reports increased interest in the KRM is being shown after the exposure on the ABC Collectors program. Locals and visitors to Sydney should set aside a day on a weekend to pay a visit. You can also take Ian that piece of disposal equipment (in good condition) rather than take it to the tip which may have been your intention.

Summerland ARC have concluded their month of celebrations, the final activity was an advanced licence course with five starters, four of whom were successful. A standard course is planned. They have also had a construction day of a UHF SWR meter, made available by Bruce VK2VA. Orders for this kit (\$35) can be directed to John VK2JWA at treasurer@sarc.org.au

A VK2 operation is planned from **Mt. Kosciuszko** for the mid summer Field Day next January. Details in a future issue of AR. This month will be busy for **NSW WICEN** with the annual Barrington Tops search for a lost aircraft and the Hawkesbury Canoe Classic.

ARNSW have advised that work commitments has forced Norm VK2TOP to retire from his position on the committee, a trip to attend meetings from northern VK2 he made most months. Norm will continue to process membership renewals for ARNSW. The ARNSW membership register had continued on from when

those WIA members in VK2 were through the NSW Division. Recently a post out was made to all unfinancials on the register.

If you received a reminder letter please respond with your intentions so that the records can be adjusted accordingly. Anyone wishing to become a member of ARNSW can find a application form on the ARNSW web site: www.arnew.org.au The education team associated with ARNSW will again be conducting the full range of exams at the Wyong field day on February 28th 2010, advises group leader Terry VK2UX. The last Trash & Treasure for the year at VK2WI is scheduled for Sunday 29th November.

In preparing these notes I rely for some of the material in the news items submitted to **VK2WI News**. What I have noticed is while many submitters advise several times leading up to the event or activity but rarely is there any follow up with the results.

For example - it might be their AGM is to be held but nothing appears as to who was elected for the incoming year. Maybe it is a field day and again no report on how it went. These 'after event' reports would inform listeners and readers of the outcome as well as provide addition variety to the news bulletins and be a reference source for some future history. Please consider - as someone once said.

With next year being the centenary of the **WIA** - a bit of history.

The 'Institute' resulted from a meeting held in Sydney in March 1910. When the NSW Division was celebrating its 50 years there were four Branches of the Division. In addition, the State was divided into zones. At this time there were only a few clubs.

The four Branches were Illawarra, Blue Mountains, Central Coast and Hunter. The first to leave was the Central Coast who were seeking to acquire their Kariang club rooms and could not do so as a branch of a company. Then Illawarra and Blue Mountains left to form their respective clubs.

The Hunter Branch remained until a new set of Articles for the Division

removed the provision for Branches. They have since changed over to being the Hunter Radio Group.

A subgroup of the Division in the same area was the VHF Group, later to add ' & TV ' to their title. They were an active technical group with an evening broadcast, now the evening VK2WI session. Also each month there was a meeting, an evening Fox Hunt and a field day event. They faded out towards the end of the time the Division was at St. Leonards. Today the Home Brew and Experimenters Group is the equivalent.

Also in the 1950s the Division was looking at securing a city property. Instead the funds and effort went into establishing the VK2WI station at Dural in 1955.

Then in 1959 the 14 Atchison Street, St. Leonards property was purchased, made possible by the Division obtaining and selling on to members the vast selection of WW2 radio and electronic surplus. Soon after the Atchison Street purchase, the rear of the cottage was demolished and a hall and basement disposal area was built and opened in 1962.

Until the opening of the hall, the Division had been meeting at Science House in the city. Monthly meetings were then conducted at Atchison St until changes in the Articles replaced them with Club Conferences.

In the early 1980s the development of the St. Leonards area, the increasing high rise and parking difficulties resulted in the sale of Atchison Street and the purchase of 109 Wigram Street, Harris Park.

In 2004 when the changes occurred in the WIA structure, the role of the NSW Division also changed. It went from being the NSW Division and became Amateur Radio New South Wales. It continues the role of being a state-wide radio club. Currently its main activity is the Sunday VK2WI news bulletins and hosting the Home Brew and Experimenters Group.

The Harris Park property was sold in 2006 with the intention of concentrating all activities at the Dural site. Part of this operation was the construction of the multi purpose storage shed - something that is taking a little longer than first hoped. Last month some of the internal fitting out was started.

If the timetable can be maintained, all will be ready for the centenary which is March 2010.

73 Tim VK2ZTM.

ar

Orange Amateur Radio Club makes two Honorary Life Membership Awards

At the recent Annual General Meeting of the Orange and District ARC two long serving members were presented with Honorary Life Memberships.

Robert Alford VK2ZRJ attended the very first meeting of the Orange Amateur Radio Club in October 1960, nearly 50 years ago and is the only person to have maintained continuous membership from then until now. During that time Robert has been active in promoting amateur radio by serving on the Club committee and by helping to establish and then maintain FRED, the first operational 2 m repeater in Australia. He has been the WICEN coordinator for the Central West and has coordinated many real and simulated emergency networks.

Robert is a life-long member of the Orange community. After leaving school and completing an apprenticeship with Email (now Electrolux), he worked as a radio technician for much of his life. Currently he operates his own business supplying and supporting radio communication systems throughout the central west of NSW.

Peter Carter VK2ETK has been a strong supporter of the Club since moving from Sydney some few decades ago. Many Sydney "Old Timers" will remember Peter from his old call signs VK2ZPC and VK2TK and especially his interest in the VHF & TV Group. He too has served on the Club committee and has been a prominent and active member of WICEN and of the Club.

Peter, now retired, still maintains his enthusiasm for amateur radio, but is probably better known around Orange for his interest in music. He has been involved with both the Orange Regional Conservatorium and the local community FM station, where for some years he presented a program on Sunday evenings titled "A Touch of Classical". Peter has been able to put his technical knowledge to good use by digitally recording and then producing CDs for many local musical events.

Congratulations to both these gentlemen for outstanding service to the Orange & District ARC and to the general promotion of amateur radio.

The Orange & District ARC will celebrate their fiftieth anniversary in October next year. The committee is hoping to compile a history of the Club and would appreciate any stories, photographs, logbook entries, QSL cards etc from everyone who may have had some connection with the Club in the past, especially in the early days. Any information can be sent to the Secretary, Orange & District ARC, PO Box 1065 Orange 2800. Further details about the Club and its activities are available by logging onto the web site (www.odarc.org).



Robert Alford VK2ZRJ and Peter Carter VK2ETK

VK3

Amateur Radio Victoria News

Ross Pittard VK3CE

Website: www.amateurradio.com.au

Email: arv@amateurradio.com.au

Gateway is on for VK3RMM D-STAR Repeaters

The D-STAR repeaters on Mt Macedon north-west of Melbourne are now connected to the D-STAR internet gateway enabling it to be linked to many other similar repeaters. Amateur Radio Victoria switched on the gateway on Tuesday 18 August for the 2 m and 70 cm repeaters using 3G wireless broadband after ADSL and other wireless options were found not to be possible at the site.

After a very substantial expenditure for new antennas, installation, cabling and new filters, the VK3RMM D-STAR repeaters first went on air in June for initial testing, essential to ensure compatibility with other radio services at the site. After a number of false starts due to broadband services providers not living up to their advertised claims, the wireless modem and gateway was installed on site by Ross Pittard VK3CE.

Many D-STAR users became aware that the gateway had opened on VK3RMM including a couple of hams from the United States who were among the first to use it. The final part of the project will be installation of the 23 cm D-STAR digital repeater that requires further antenna rigging.

Amateur Radio Victoria again acknowledges the generous donation of the D-STAR repeater modules by ICOM (Australia) and the technical support of the National D-STAR Instructor/Administrator Richard Hoskin VK3JFK.

ILLW

Another successful International Lighthouse and Lightship Weekend with VK3WI at the Williamstown Lighthouse and Timeball Tower AU0036. A special QSL card is being issued for all contacts. Thank you to our Chief Operator this year, Ian Downie VK3XID and the others who helped put the station on air including Tony VK3VTH, Wayne VK3VCL, Peter VK3QM, Victor VK3DKM, Johnno

VK3FMPB and Jim VK3PC. Plans have begun for ILLW 2010 at Williamstown, and also participation again in the International Museum Weekend (IMW) in June.

This year under the callsign VK3RAN, Amateur Radio Victoria operated from HMAS Castlemaine at Williamstown for IMW, and in 2010 there is a possibility of operating from the ship plus another museum.

Victorian Local Government Award

Also the first claim for the Victorian Local Government Award has been received from Craig Edwards VK8PDX – well done. This operating award has been initiated by Amateur Radio Victoria to encourage on air activity based on communicating with and between the 79 local government areas in the State of Victoria.

More details along with those of the Keith Roget Memorial National Parks Award can be found in the Awards section of the website. There must have been others who made sufficient logged contacts to qualify for the award during the Worked All VK Shires in June and perhaps more award claims can be expected soon.

Up and Coming Events

The 52nd Jamboree Of The Air is 17 & 18 October and VK3WI will again be supporting the Girl Guides Association.

Our next Foundation weekend course will be held at ARV offices in Ashburton on the weekend of November 28/29. Please contact Barry Robinson VK3PV on 0428 516 001 or via email at foundation@amateurradio.com.au

Don't forget the Centre Victoria RadioFest returns to the Kyneton Racecourse on Sunday the 14th of February, gates open at 10am. We are still looking for volunteers to present small talks on any aspect of our hobby, if you could help us please contact the organising committee at radiofest@amateurradio.com.au

Why not join and support the state-wide organisation Amateur Radio Victoria, it costs \$30 for Full or Associate membership and \$25 Concession, for two years. New members are most welcome and an

application form can be found on our website or will be posted out on request. **ar**



Centre Victoria RadioFest No. 3

This major amateur radio event is on Sunday 14 February 2010. At the Kyneton Racecourse an hour from Melbourne, Ballarat and Bendigo.

Proudly supporting the WIA centenary celebrations.

Sales space bookings and more info:

www.radiofest.amateurradio.com.au

"Hey, Old Timer..."

If you have been licensed for more than 25 years you are



invited to join the

Radio Amateurs Old Timers Club Australia

or if you have been licensed for less than 25 but more than ten years, you are invited to become an Associate Member of the RAOTC.

In either case a \$5.00 joining fee plus \$8.00 for one year or \$15.00 for two years gets you two interesting OTN Journals a year plus good fellowship.

Write to
RAOTC,
PO Box 107
Mentone VIC 3194

2009 ILLW — 441 Lighthouses and Lightships — and just one timeball, at Williamstown in VK3

John Karr VK3FMPB

The International Lighthouse and Lightship Weekend 15-16 August only had one Timeball Tower registered which is located at Williamstown just 12 km from central Melbourne by road.

Activated for the fifth year in a row by Amateur Radio Victoria VK3WI, this iconic bluestone structure is at Gellibrand Point on Hobsons Bay, and its history goes back to 1849.

The tower was operated up until 1926 with the last dropping of the timeball on 31 August or the 1st September 1926 depending on which paper you are reading. The timeball was restored in recent months by the Gellibrand Rotary Club and was seen to fall at 1 pm.

This year the VK3WI chief operator was Ian Downie VK3XID, who initiated the first Amateur Radio Victoria activation, with others including ARV President Jim Linton VK3PC who was there once again.

Everyone was made feel most welcome with those attending including Tony VK3VTH, Wayne VK3VCL, Peter VK3QM, Victor VK3DKM and myself Johnno VK3FMPB. The various tasks including antenna erection and operating were shared.

The weekend saw the first on air contact made by 0930 and soon after the first of many lighthouses were logged, which was the Manly-Warringah Radio Society VK2MB at the Barrenjoey Lighthouse in NSW.

By 1630 60 contacts had been made despite a QRN level of S9. It was hard going so VK3WI took extreme patience with a number of Foundation and mobile stations that managed to have their signal just heard.

Equipment being used was an ICOM IC-706 MKIIG, AT-7000 automatic ATU, and a Yaesu FT-897 and AT-897 ATU. Antennas which were set up included 80 m and 40 m dipoles with their centre points at the top of the lighthouse creating inverted vees, a 20 m vertical and a 2 m and 70 cm collinear vertical.

Visitors are numerous and quite a few

of them stopped to have a chat about what is going on. Perhaps we have managed to plant a seed and sign up a few future Foundation callsigns in the process.

The night session from about 1800 onwards was running hot. Stations coming up all over the place: VK2, 3, 4 and 5. The log book was filled up nicely.

Then it was decided to check the door lock, with Wayne and Jim inside and Tony outside. The result was that the lock froze shut; this development was made known during a QSO much to the amusement of everyone on frequency.

Wayne dismantled the lock, cleaned it out, used some WD-40 spray and put it all back together. At 2200, it was a good time to go QRT.

Early on day two, Jim VK3PC joined Tony VK3VTH who opened the station at 0700. The log was filling up with the Remembrance Day Contest and by midday 125 stations had been worked including three ZL lighthouses and more lighthouses from around VK3, VK7 and VK2.

With a heavy band of rain and 40 knot winds, the noise level on 14 MHz fell to S2 but stayed at S9 on 7 MHz, leaving the operators scratching their heads as to why this was so.

They took advantage of the improved conditions on 20 m and worked it like mad. 'VK3WI lighthouse station calling CQ, CQ, CQ, VK3WI Lighthouse CQ RD Contest and standing by...' I am sure I will remember that call until I die after hearing it at least 100 times over the weekend.

Tony VK3VTH continued calling but no new lighthouses were available at that moment. So you can see that such fun events and contesting can be tedious and even boring at times.

An electronic entry for VK3WI in the RD Contest is being

compiled by Tony VK3VTH while Jim VK3PC has undertaken the job of QSLing, and his only disappointment was not making contact with a particular lighthouse.

Adam Shrimpton VK3PHY, who was to walk 18 km to reach the Wilson's Promontory Lighthouse, had been heard in contacts with others, but VK3WI unfortunately missed out, due to the conditions.

With closing VK3WI at 1600 on the Sunday, all agreed it was a worthwhile operating event and social gathering and I am sure most will return for ILLW 21-22 August 2010. **ar**



ALARA

Aysha Venugopal VK5FASH

Marilyn VK3DMS honoured

The spring sun seemed to have turned out in full glory over Adelaide on Friday September 11 to honour retiring ALARA committee member Marilyn Syme VK3DMS.



Marilyn Syme VK3DMS (left) receives her certificate of appreciation for 30 years of service to the ALARA committee from ALARA president Tina Clogg VK5TMC

The ALARA table at the South Australian Museum's Balaena Café had a good turnout of ALARA members as Marilyn and her OM Geoff VK3ACZ came down from Mildura where they live to accept the honour. Current ALARA president Tina Clogg VK5TMC presented her with the certificate of appreciation and a lovely necklace as a memento.

The ALARA committee is now planning to establish a little tradition by honouring all of its long-serving committee members.

A former ALARA president, Marilyn has served on the ALARA committee for 27 years in various capacities since getting her call sign in 1980. She was inspired by her husband Geoff who picked up amateur radio while running the post office at Pooncarie in New South Wales in 1977.

Though Marilyn was on the ALARA Net as Geoff's second operator, she went off frequency for two years from 1978-80 until she obtained her own amateur licence. After that, there was no stopping her. She served for the first time on the ALARA committee as the Victorian representative in 1982 and since then held several posts such as vice-president, president and contest manager.

As president, Marilyn steered the

Continued at head of page 37

Miss ALARA correction

In the photo on page 35 of *AR* September 2009, Dianne VK3FDIZ is holding "Love-a Duck" not "Miss ALARA" as captioned. This is a picture of "Miss ALARA". Thanks to Jean Fisher VK3VIP, VK3 Representative for ALARA, for the correction.



ALARA YLs (top row from left) Aysha Venugopal VK5FASH, Pat VK3OZ, Tina Clogg VK5TMC, Marilyn Syme VK3DMS, Jade Ross VK5FXYL and her son Brendan, Myrna VK5YW, Maria McLeod VK5BMT, Lesley Smit VK5LOL, Jenny VK5FJAY, (seated from left) Sharron May ZL3GL, Jean VK5TSX and Shirley VK5YL at the South Australian Museum's Balaena Café on Friday September 11.

VK6

A last minute plea for input resulted in a flow of information this month! It seems one of our local amateurs has way too much time on his hands as he is now on the committee of just about all of the metro clubs except the NCRG! I am talking of Heath VK6TWO who has submitted reports not from one or two of the metro clubs but from four of them! So without further ado here are Heath's notes.

WARG

It has been an interesting few months since the AGM and we are seeing some very positive changes. We are trialling some new repeater/linking controllers with all of the bells and whistles for manual/automated repeater RF linking.

Our initial trial is between our existing WIA linking hub at VK6RAP and

our latest site at Walliston, VK6RLM where our DSTAR repeaters are also hosted. This will allow us to determine a 'standard controller' for our overhaul of the WARG repeater network.

Next we will be assessing some link transceivers and repeaters on which to standardise.

The new committee has introduced a 'Site Register' to manage all of the information regarding equipment at

International Lighthouse Weekend

Our intrepid Lighthouse operators were once again travelling to the deep south to experience lousy weather and even poorer band conditions! A report from Nigel, who is now VK6NI.

Once again the 'Capes' were active for the International Lighthouse Weekend. Wally VK6YS was at Cape Leeuwin under the call sign VK6CLL, and Nigel VK6NI and Bernard VK6FBRB were at Cape Naturaliste using the call sign VK6CNL.

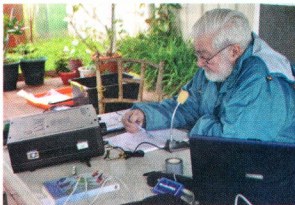
Conditions were not the best (an understatement) with winds gusting to 120 km/hr with rain and, at times, hail falling. The weather was so bad that both stations operated on simple antennas on the Saturday and only VK6CNL at Cape Naturaliste managed to get the Spiderbeam up on Sunday.

Cape Leeuwin contacted 20 lights and Cape Naturaliste 13 lights. Propagation was poor with mostly stations in VK and ZL contacted and only a couple of Lighthouse's outside of the region worked.

Both stations participated in the Remembrance Day contest handing out numbers when asked. This is the third year that the joint operation has occurred and it could only happen with the co-operation of the managers of the tourist facilities at both lights.

We especially thank Luciano and Karma, the managers at Cape Naturaliste who very kindly gave us the run of their home in one of the Lightkeepers cottages to set up and operate.

More information and a short movie of the Cape Leeuwin operation can be found at <http://www.westozdx.net/LIGHTHOUSES/LIGHTHOUSES.html>



Above is Bernard VK6FBRB and below, The Spiderbeam at VK6CNL Cape Naturaliste lighthouse.



all of the WARG repeater sites such as antennas (types/gain/height/connectors), transceivers (type/connectors/power) and DC system (PSU/batteries/type/connectors) and so on.

They have also introduced a 'task list' to keep track of all outstanding and future tasks. This should allow more members to get involved in WARG activities and be prepared for what equipment might be required to complete the task on-site.

The VK6 Packet/APRS has been given a new life and is in the process of an overhaul and expansion thanks to the enthusiastic work of VK6FUN and many others. D-STAR has become quite popular especially with some of the newer hams to the hobby. We have seen a recent increase in VK6'ers utilising DVDongles to keep in contact while they are on the road with work or where RF is a problem.

**Heath VK3TWO/VK6TWO –
WARG President**

HARG

The AGM has seen some changes to the committee which should have some positive effects in exciting activities for club members.

Recent projects such as the tower replacement, new HF beam, new quarter wave 40 metre vertical, new 6 metre beams, new 2 metre beams and shack reconstruction is expected to continue to improve on the club operating atmosphere.

Marty VK6FDX and Heath VK6TWO conducted a reconnaissance for a potential field site for use in the near future for a weekend of experiencing/sharing a field setup. Since then, many members have been 'scouting' for potential field locations. Hopefully with summer approaching, we will see many weekends at the club fun.

The RD contest saw most HARG members participating from their home QTHs and exchanging points on all modes and all bands from HF to 23 cm. Local competition was fierce this year and VK6 looks forward to many RD trophies for 2009.

**Heath VK3TWO/VK6TWO –
HARG Vice President**

VK6 WICEN

WICEN has been very active with some very exciting events such as Australian Safari, Targa West Rally,

Forrest Rally and the Donnelly Rally providing critical SOS (Safety On Stage) official tracking and reporting of the entrants and other critical timing and message handling.

WICEN is currently increasing its membership and is recruiting new members to get involved with this exciting yet critical service to the wider community. If you are interested in supporting your local and wider community in the event of a disaster, join WICEN to learn formal message handling procedures to/from other organisations such as Police, Fire, Ambulance and SES. You will get free official access to rallies where you can put your training into practice so that you are prepared in the time of need. Experience what you need for a typical 'field' setup so that you can be self sufficient in providing emergency services to others. Enquiries should be forwarded to the VK6 WICEN State co-ordinator – vk6zulk@wia.org.au

Two members of WICEN (Heath VK6TWO and Danny VK6ZUK) setup up a typical emergency station for use as an RD field station. Equipped with the 'portable shack' consisting of masts, Yagis, discone, dual-band collinear, solar panels, generator and some creature comforts, it was a site other hams visited with surprise. 'Decked out' with IC-7000s, FT-847, ID-1, IC-2820s, 300 Ah batteries, auto-ATUs and more wire than you can poke a stick at, it has motivated visiting amateurs to play 'real AR' out in the field.

**Heath VK3TWO/VK6TWO –
WICEN Technical Officer**

WA VHF Group

After a recent display of SDR (Software Defined Radio), the club has decided to run some practical sessions to build some SDR kits. The plan is to have a collaborative approach to each kit build, and sharing experiences, tips and testing with other members. In the spirit of AR, this will be open to any (non-members) who wish to participate.

The 'intelligent beacon' project is still a work in progress, however a few unexpected setbacks have caused some delays.

**Heath VK3TWO/VK6TWO – VHF
Group Councillor**

Well Heath is certainly a busy boy and his contributions are much appreciated.

My plea for news this month also brought Bob VK6POP out of the woodwork with news from the Scouts.

Scouts WA

The Scout Communication Team was busy on the RD contest weekend. As well as participating in the RD, they ran a Foundation Licence course. The licence course was conducted at the Peter Hughes Scout Communication Centre. Two Leaders and six scouts from 4th Victoria Park Scout Troop passed their assessment. Congratulations to all involved.

Meanwhile, the rest of the team, ably assisted by four scouts and a Leader from Waylen Bay Sea Scouts, took part in the RD Contest. The Waylen Bay Scouts all obtained their Foundation amateur licence at the end of 2008.

Congratulations to Flynn VK6FFFF, who decided late Saturday night to work VHF on his own. Flynn managed exactly 100 contacts.

The Scout Communications team had a table at the recent Hamfest. We did well, and the money is being put to good use buying equipment to support portable operation of the two metre repeater that the team is building.

Thanks Bob, it sounds as though the Scouting movement is still very much a gateway into amateur radio.

Another item from Nigel

The West Oz Dx group (<http://www.westozdx.net/IOTAS/OC211/OC211.html>) is planning to activate the Houtmann Abrolhous (OC211) over the New Year break this year. The organizer is Wally VK6YS and participants so far are Bruce KD6WW and Nigel VK6NI. Transport to and from the islands has been arranged as well as the use of a fisherman's shack as the operating location. OC211 is on the IOTA 'Most Wanted' list. With only 10.8% activation recorded the weekend is bound to be busy. We are looking for at least one more operator with CW experience so if you are interested in a full on weekend of radio operation contact Wally VK6YS@westozdx.net

Regards, Nigel VK6NI (ex VK6KHD)

Thanks very much Nigel, I imagine conditions were pretty bad, having been at the Leeuwin light in a massive storm many years ago - it is scary when those

Continued at foot of next page

ALARA continued from page 34

association through some difficult times. In turn, the friends she made were a source of support at times of personal trials. Retiring at 72 from ALARA, it is truly remarkable that Marilyn was actually one of the original group that framed the Association's constitution and is part of its history.

Talking about what she loves about ALARA, Marilyn said, "It is being part of ALARA, the friends I have made and the contacts I have made. I am very proud of what ALARA has become and very proud of being what made ALARA." After retiring, Marilyn is now looking forward to her 50th wedding anniversary in November this year with her OM.

VK5 monthly lunch

The ALARA monthly lunch turned out to be really special as Adelaide had some international visitors. Pat VK3OZ came in from Melbourne bringing her sponsored YL Sharron May ZL3AE and her OM Glenn ZL3GL who were visiting Victoria and South Australia. Taking the long route to Adelaide from Melbourne

by road, they had driven down the scenic Great Ocean Road. The visitors seemed to have enjoyed their trip, Apollo Bay and the warm Adelaide weather. Pat and Sharron had met during the ALARA meet in Tasmania in 2008 and struck up a good friendship.

ALARA contest

The 29th ALARA contest on the last weekend of August saw the YLs enjoy themselves, despite the propagation conditions. Lesley Smit VK5LOL (formerly VK5HLS) had her first stint as contest manager for ALARA. The contest had its exciting moments with YLs being able to contact Mary Moore WX4MM from USA who got at least seven contacts into VK. Shirley VK5YL managed a contact with Elizabeth VE7YL in Vancouver, Canada, while Pat VK3OZ had a feast with her CW contacts.

If you are interested in contesting or want to get interested, this could be an exciting time to get into it.

Lesley is keen to encourage more "F" calls among YLs to participate in the contest and would like to have some suggestions.

This year, 34 YLs participated, which was a wonderful thing.

There were also queries about the contest rules that will be addressed with the committee before next year's contest. One major advantage during the contest was the new logging software designed by Mike Subocz VK3AVV. Thanks Mike, says Lesley. She used it for the first time this year and says it certainly made her work as contest manager a lot easier.

Before you send in your logs, do check again. You might be eligible for an ALARA Award with which to decorate the shack and not realise it.

All that VK and ZL amateurs need is 10 YL ALARA member contacts from four different call areas while DX amateurs need just five YL ALARA member contacts from three call areas.

The certificate is a lovely one designed by Kathy Gluyas VK3XBA and has all the floral emblems of all the states and territories of Australia.

ar

VK6 News continued

six metre plus swells roll in! Also there must be a CW operator who wants to spend a weekend on the Abrolhos islands, pity my speed is abysmal!

NCRG News

The NCRG has been busy recouping from Hamfest this month, assessing what needs changing and planning next year's event. Feedback is always appreciated from amateurs around the State as to what you think could be improved, added, removed, whatever. Please take time to let the committee know so we can work on it for next year's event. Email me in the first place and I will pass it on.

The contest season will soon be upon us and plans to visit Muresk for the next Oceania DX contest are in place, and other contests such as the CQWW DX SSB on 25 October are lined up over the next few months. Bernd VK6AA and Kevin VK6LW will be making a big

effort in the CQ WW DX CW contest in November from the club station; I hope they do well!

Incidentally the NCRG had a visit from Nick 9A6DX recently, an avid contester from stations all over the world. He told us he had operated from 94 countries on his work travels and took every opportunity to visit and operate from local clubs. We were very surprised when he told us of all the clubs in the world he had been to the station at NCRG and the club station in Lima, Peru were the best of the lot! You get that warm fuzzy feeling when people tell you that!

It is a pity that the two or three nights he used the club station, the conditions were shocking. Like so many others who have visited us in Western Australia, he was amazed at how the propagation from this part of the world is so difficult to comprehend. So much so, that when he is in Lima at Christmas, he has offered to set up some skeds to enable

some of us in WA to get our first OA contact. I personally look forward to that because after twenty two years living in Perth I have three South American countries worked and I had all bar one confirmed on 10 metres from the UK back in the 80s.

Finally in NCRG news I would like to remind all WA amateurs that the NCRG will be holding an open day / car boot sale at the club premises in Whiteman Park on Sunday 14 March 2010 to commemorate 100 years of the WIA. You are all most welcome and more details will follow. Please come out and visit us if you would like any Sunday morning between 9 and 12 am and have a look around.

Enough of these ramblings; thanks for your attention this month and note I have given up on wishing you good DX as the Sun just is not listening to me.

Till next month, 73 Keith VK6RK
vk6rk@wia.org.au

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Remembrance Day Contest Report

IPSWICH & DISTRICT RADIO CLUB

REMEMBRANCE DAY CONTEST 2009

Mike Charteris VK4QS

President

It has been at least a decade since operators from the Ipswich & District Radio Club had participated in the "Remembrance Day" contest. We duly decided that this year 2009, would see the radio club put in and activate the club call sign VK4WIP. The underpinning motivation was to encourage the club's "F-call" operators to gain valuable experience in a busy operating environment.

Listening intently to the W.I.A broadcast, we all gained a new perspective as to why we were actually here.

"The passing of amateur radio operators during World War Two"

Remembrance Day, is the day of the year that the amateur radio community have the opportunity to pause, and remember those servicemen who paid the supreme sacrifice during World War Two.

It has now been more than six decades since the last shots of WW II were fired. For many, the links to this turbulent period of time are still of a very personal nature. There are still hams alive today who actually fought in scorching deserts of Africa, not to mention the steamy jungles of New Guinea.

Many amateurs, whose fathers, uncles and now grandfathers, fought and were perhaps killed or wounded, or came home broken, to recall with both sadness and joy this day, August 15th 1945. And furthermore down the generations since 1945, there are amateur radio operators today who have, and continue to serve our Defence Forces, so allowing us to enjoy the freedoms we take for granted.

Preparations

We gathered at the radio clubhouse on Saturday morning to an 80m dipole. This important task was handed over to the Club's "F" Call members.

The antenna theory and calculations were worked out on the white board before any construction began. We were lucky enough to have at hand a roll of the Military 600 Ohm wire, known as Don-10. This is a very strong twin pair consisting of both copper and stainless steel wires in the one sheath.

Once the mathematics had been completed, the wire cutters and soldering iron appeared. The wire was stripped and lugs soldered as connection points, as well as insulators tied off on each leg for attachment to tie ropes later.

Next came the RG58U and the PL259 plugs, plus a few lessons in how to, and

how not to, solder these plugs in order to maintain a good braid connection.

Skyhook

Once the 80 m Dipole was completed, the connections of the PL259's were tested, and it was then time to erect our Skyhook.

This was a 10 metre "CLARK MAST", which was erected out the front of the Clubhouse as a high feed point for the dipole. Our resident expert in this operation was Sergeant Paul Weir VK4FPDW. Paul is currently serving in the Australian Army, and undertook this task with great zest and all the professionalism we have come to expect from members of our Defence Forces.

We had quickly raised the 80 m Dipole to the top of the Clark Mast. Sadly the circumstances dictated that the lay of the land would not support a dipole. We then decided to change the format to that of an Inverted "V", and duly tied off the ends to tree points of a suitable height.

The time was 1400 so we adjourned to our home QTH's to await the setting sun. Our Foundation members had from the very beginning shown great enthusiasm for the many tasks required to make this a success. A hands-on approach was the overall goal in order to give our new Foundation amateurs valuable field experience they could use.

BBQ & contesting

As the sun set the air was filled with the enviable scent of steak & onions, with BBQ sausages topping off the menu. In the background the WIA Broadcast told us of the Amateurs who had died during the last World War. For their sacrifice and that of many thousands of others, we were here tonight enjoying the freedom they fought and died for so long

ago. At the clubhouse that night we had two serving members of the Australian Defence Force, and two ex-service members. Our special guests for the BBQ were Mr. Ewan McLeod (National WICEN coordinator) and his good wife Margaret. I would like to thank them both, as their schedule is one of the busier in our organization..

As the WIA Broadcast drew to a close, we enjoyed the BBQ meal and the company of good friends. The Foundation guys keenly readied themselves to begin operating. Many had brought transceivers to operate and give ourselves the best chance possible of making contacts.

One station operated on 80 m and another on 40 m with no undesirable interference or effects between them. As the evening progressed the Foundation operators exchanged with other "F" Calls to sit back and socialize with the rest of us.

The call sign used was that of the Radio Club "VK4WIP". The propagation into Ipswich on the evening saw a good number of contacts made as a total for all operators. Sometime around 2200 it was decided to throw the big switch.

Our Foundation Operators had enjoyed a great day and gained valuable experience in building antennas as well as operating in a busy contest environment. Thanks to all who participated in the antenna work and the RD Contest.

In the next year some significant changes to the Club's antenna structure will take place. With these improvements and perhaps a pick up in the sunspot numbers we will acquit ourselves much better than our first attempt in more than a decade.

We look forward to working you next year

Cheers & Best 73 Mike VK4QS **ar**

WICEN at the Pyengana Equine Endurance Ride

WICEN Tasmania (South) heads north east to horses, cheese, sushi and a beer swilling pig.

Roger Nichols VK7ARN

The ride was on June 20 in the delightful country between Pyengana and Goshen, west of St Helens. The weather held up well for setting up and the ride itself. Overnight conditions on Friday and Saturday included thick fog and very heavy downpours.

Four WICEN vehicles with two trailers left from the rendezvous in Snug at 0900 on Friday morning and headed up the Channel, Midlands, Esk and Tasman highways, with a brief stop in Campbell Town for coffee, nibbles and requisite discharges. Also, a brief encounter with Rex VK7MO en route to Mt Barrow.

In St Helens, Chris FCDW with XYL Liz and NXX with XYL Bev checked into their motel before continuing on. VK7s ARN Roger, FMRS Michael, and JGD Garry headed on to Pyengana to begin the set up. VK7s FAME Steve and FRAE Rhonda had to work on the Friday so joined us late in the evening after a long, dark and foggy drive – you can see Rhonda and Steve in Photo 2.

The endurance ride was organised by Portland Endurance Riders, a small local club. Its six committee members were surprised but delighted with the record number of entries for the event, which included 40 and 80 kilometre rides, reference Photo 3.

Our involvement came about by a chance encounter in St Helens by the club Secretary Tara Nicklason and an occasional WICEN member 'Tiny' Damien ex VK7LDA. The club had

experienced difficulties in maintaining communications between base and checkpoints and were looking for surety of communications. Damien suggested WICEN and exchanges of emails brought us to Pyengana.

RadioMobile software indicated we could do the job with a repeater on an easily accessible hill top approximately central to the rides. Peter VK7TPE and Chris VK7FCDW were working on Targa Tasmania in April so, by arrangement with Ron VK7ZRO, Peter and Chris were deployed so as to be close to Pyengana.

They met up with Tara and did a quick survey to confirm the RadioMobile results. As it turned out, the difficult checkpoint near Goshen

was later relocated enabling simplex communications. During the Targa site meeting, Chris had mentioned APRS tracking capability which was quickly accepted by Tara. This would definitely need a temporary digipeater so the planned repeater location became an additional checkpoint and digipeater site.

On arrival at the ride base at the Pyengana recreation ground we found truly luxurious conditions awaited. Our base was in the hall, with running water, ablutions and, later, a Lions Club run cafeteria.

Our friend Ossie Owens, President of our usual 'client' ride club, Southern Tasmanian Endurance Riders, (STER), was there and made it clear that we

The equipment used

Base and APRS radio	Kenwood D710A, Diamond X-50 on a 12 metre telescopic trailer mounted mast.
Base APRS monitoring	The D710A coupled to a notebook PC running AGW Packet Engine Pro and AGW Tracker.
Checkpoints	Various two metre rigs.
APRS portable	Puxing 777, TinyTrak III Plus, DeLuo SIRF III GPS in the outer of a hydration back-pack.
APRS digipeater	PRM8025, PacCom Tiny 2 TNC, Diamond X-30 on a tripod mount mast.
Supplied for ride organiser use	VHF high band PRMs mounted in cases with magnetic base whips (non amateur licensed by WICEN).



Photo 1 Equipment in use at the base location.

such housing and other conditions on STER rides!

Three base units were established; APRS, checkpoints and ride organisers. Equipment used at the base may be seen in Photo 1. APRS and checkpoints shared a dual band radio and antenna on a 12 metre mast.

A third network was set up, on a WICEN licensed commercial frequency, for ride organisers and utilising a magnetic base whip on the community centre roof. Garry VK7JGD and Michael VK7FRMS went off up the hill to check

simplex communications and to establish the APRS digipeater which was left on site overnight to monitor our movements and to look out for the late arrivals coming up from Hobart.

The site had a good path to VK7RAA on Mt Barrow. Steve and Rhonda's track was covered all the way from Hobart via RAD, REC, RAA and our temporary digipeater. An unusual occurrence as 'trackees' normally drop off the edge of the APRS world when descending to the coast from St Marys.

Satisfied all was in order, Stu, Bev, Chris and Liz went to the nearby Pub in the Paddock, famous for its beer drinking pig, for a counter meal before returning to St Helens for the night. Garry, Michael and Roger prepared their own meals at the Base and awaited Steve and Rhonda's arrival before all retiring for the night in the backs of respective vehicles and, in Roger's case, a tent.

All were ready for action by 07:00 on Saturday morning. Chris, Michael, Steve and Rhonda

headed bush to the checkpoints and digipeater locations. Stu and Roger manned the base. All went pretty well according to plan. The only remedial actions required being battery related at the digipeater and a battery changeover for the portable tracker unit.

Steve and Rhonda's checkpoint role was the first to be completed enabling them to head off back home to Snug. Michael was delayed organising a float for a lame horse which had been walked into his checkpoint, but once sorted was also able to head south to Cradoc. Garry stayed on, though his checkpoint duties were completed, to enable the digipeater to stay in action until its carrier had returned to direct contact with base.

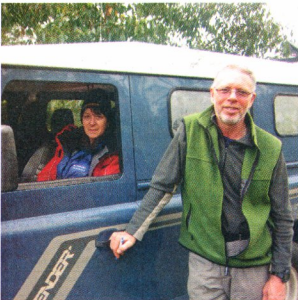
We were keen to completely and accurately map the course via the APRS track, especially given that the original course maps were very much of the 'sketch' variety.

When the beacons were being heard directly, Garry returned to Base, the antenna switched to a magnetic base dual band and the 12 metre mast lowered, packed up and hitched to Garry's vehicle for his return to Snug.

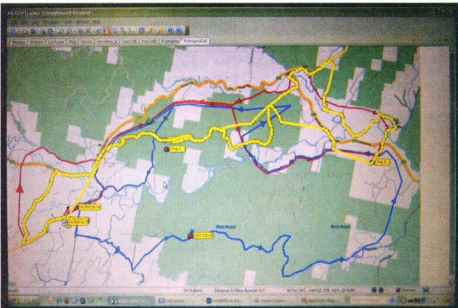
When the tailenders arrived back at Base, Stu, Chris and Roger packed up the gear and prepared for the feast laid on by the Club for the riders, strappers, other supporters and the workers, including us. Bev and Liz were ferried from St Helens to join us for the lamb spit roast, potatoes and a selection from the 12 metre

long table of side dishes. This followed by the same table now filled with Pavlovas and other goodies. Prizes were presented before all returned to various accommodations for a very wet and noisy night (for clarification - rainfall caused!).

The residual WICEN group returned, or more correctly grazed its way, to the south via the east coast with eggs and bacon in St Helens, and sushi and Devonshire Tea at Kabuki by the Sea. All in all, a very enjoyable weekend and, most importantly, a very satisfied 'client'. Our adoption of the ARRL's slogan 'When All Else Fails - Amateur Radio Works' was justified!



Rhonda VK7FRAE and Steve VK7FAME



A screen image showing the endurance ride APRS tracks.

Contests

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Contest Calendar for October—November 2009

October	3/4	OCEANIA DX CONTEST	SSB
	9	10/10 International Day Sprint	CW/Phone
	10/11	OCEANIA DX CONTEST	CW
	17/18	Worked All Germany	CW/SSB
	17/18	JARTS Worldwide RTTY	RTTY
	17/18	50 MHz Sprint	All
	18	Asia Pacific Sprint	CW
	24/25	CQWW DX Contest	SSB
	24/25	ARRL International EME Competition	All
November	7/8	Ukrainian DX Contest	SSB/CW
	8	Straight Key Weekend Sprintathon	CW
	14/15	Worked All Europe	RTTY
	14/15	Japan International DX Contest	SSB
	14/15	OK-OM Contest	CW
	21/22	Bulgarian DX Contest	SSB/CW
	28/29	CQWW DX Contest	CW
	28/29	Spring VHF/UHF Field Day	CW/Phone

I hope everyone enjoyed or will enjoy the SSB and/or CW Oceania Contests. Whether you just give out a few QSOs on a Sunday afternoon or set aside the whole weekend to compete, it should be a lot of fun and who knows we might even have a sunspot or two by now..... yes I know, I know, let us not get too far ahead of ourselves.

After being in Alice Springs for two months an antenna upgrade has finally occurred. Instead of just having a multi band vertical, the backyard has been further adorned with a 3 element 20 m monoband Yagi.

This was completed the day before the Remembrance Day contest thanks to the help of Kev VK4KKD who personally delivered the newly purchased 'One Man Tower' that is mounted on a trailer. So for the rest of the year I can see myself entering most contests in the Single Operator Single Band categories on 20 m.

The Big One CQ World Wide

Imagine combining the anticipation and excitement of the Bathurst V8 race, Melbourne Cup, AFL and NRL grand finals all into one event and turning it into an amateur radio contest?

Well imagine no more my friends because it happens in the form of the CQ World Wide Contest. The CQ WW SSB event occurs this month on October 24 and 25 and runs for 48 hours. It is an exciting weekend with many rare and semi-rare DXCC activations to chase.

It is also one of those weekends where those bands that have been very quiet come to life, yes 15 and 10 metres, I am talking about you too.

Those operators with even the most modest stations can finish the weekend with pockets full of new DXCC entities, band countries, CQ zones, WPX prefixes, US states, JCC/JCG numbers or whatever

else takes your fancy. So lock the doors, tell your friends and work mates you are sick, spend plenty of quality time with your family during the week because you will want them to leave you alone on Saturday and Sunday.

Stock up on meals and snacks that require virtually no cooking, unless you have a family member who is willing to do 48 hour room service.....yep, better stock up on those snack foods. If you can fit an air mattress in your shack then do it. I think a semi-uncomfortable sleeping situation helps you out of bed easier for that early wake up call and you do not disturb your partner when you set the alarm at 2 am, then 3 am, then 4 am and then 5 am to check if 40 m or 80 m is open!

Remember how I suggested telling your friends and workmates that you are ill, not only is that a great excuse to get out of social events for that weekend, it also lends itself to throwing a sick day on

Monday to recover from 48 hours of very little and often interrupted sleep. And once you have recovered and have sent off all those QSL cards, before you know it, the CQ WW CW event will be on your doorstep on November 28 and 29.

The official website of the CQ WW is www.cqww.com/ and a pdf of the rules can be obtained at www.cq-amateur-radio.com/cqwwhome.html

CQWW controversy

Last year's CQ WW SSB and CW contests have been rocked by some high profile disqualifications and hefty penalties. This has been covered by the excellent website www.radio-sport.net

Some of the headline stories covered by Jamie Dupree NS3T are "Five DQ's in 2008 CQ WW SSB test", "More DQ news likely in '08 CQ WW CW", "CQ WW gives cheats one year ban", "CQ WW expands in-test check rule" and "CQ WW chief fires back on cheats".

By the time you receive *AR*, I am sure Jamie would have added more news items leading up to CQ WW SSB and CW. So for a rundown of the 2008 disqualifications, the multi-year bans and 2009 rule changes please visit the Radio-Sport website for all the controversies and fall-out of the past couple of months.

VK/Trans Tasman 80 m and 160 m Contest 2009 Results

The dynamic duo of VK7VH Vince Henderson and Ray Smith are winners of the VK/Trans Tasman 80 m Trophy. 252 stations participated in the 2009 Trans Tasman 80 m contest and 61 entries were received.

This was down from last year's 301 stations and 87 entries. All call areas from VK1 to VK7 and ZL1 to ZL4 joined in on the fun. There were no VK8 participants but I can assure the organisers that will change for 2010 as you will hear VK8PDX giving everyone a shout. This decrease in VK and ZL logs was a disappointment, but it was encouraging to see the high percentage of participants working in all six hours of the contest.

There were excellent conditions on 80 m and many VKs reported booming signals from New Zealand. In VK5 I

was not hearing the booming ZLs but the QSOs to our friends across the pond did occur in each hour block which was encouraging. The contest organiser Bruce VK3JWZ reported the VKCL contest logging program worked flawlessly. As with all contests, participants are urged to send in their logs, no matter how big or small your numbers are.

Remember that the return of logs is what determines the viability of any contest and the Trans Tasman is no exception.

The Frankston and Mornington Peninsular Amateur Radio Club (VK3FRC) are winners of the VK/Trans Tasman 160 m Trophy. The team comprising Roy Seabridge VK3GB, David McAulay VK3EW and the rest of the crew won with 1943 points over a closely fought dive for the finish line between VK4ZD (1715), VK7VH (1711) and VK2AWX (1693). The 160 m contest had 158 stations participating with 42 logs received.

Last year there were 168 participants with 52 logs. Again competitors reported low noise and excellent Trans Tasman propagation. The contest organiser reported there was a lack of VK5, VK6, VK8 and ZL participation but the wonderful conditions and increase in VK7s was a highlight.

I certainly enjoyed my first Trans Tasman on 80 m this year and I will definitely be back to give the much sought after VK8 prefix.

Although after my experience with the 2009 NZART Memorial contest, I know that consistently making it across the Tasman will be a struggle – but that is all part of the fun and the challenge. Top 3 place getters in each category are listed here and the full results are on the WIA website at www.wia.org.au/members/contests/trans-tasman/. Well done to Bruce Renn VK3JWZ for all his hard work.

80 m Phone Overall

VK7VH	2801 points
VK4ZD	2503 points
VK3FRC	2330 points

80 m Phone QRP

VK3IO	1418 points
VK2IG	1209 points
VK2WJD	1146 points

80 m Phone Foundation Licence

VK2FAJA	870 points
VK2FMAM	663 points
VK2FNIT	549 points

80 m Phone Multi-Operator

VK7VH	2801 points
VK3FRC	2330 points
VK2AWX	2252 points

80 m Phone 1st ZL

ZL4AL	1771 points
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160 m Phone Overall

VK3FRC	1943 points
VK4ZD	1715 points
VK7VH	1711 points

160 m Phone QRP

ZL2AYZ	541 points
VK4ATH	259 points
VK3ZGP	85 points

160 m Phone Multi-Operator

VK3FRC	1943 points
VK7VH	1711 points
VK2AWX	1693 points

160 m Phone 1st ZL

ZL4R	1264 points
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Winter VHF/UHF Field Day 2009 Results

Results of the Winter Field Day are in and the top 3 in each category are listed here. For full results visit www.wia.org.au/members/contests/vhfuhf/. The Spring Field Day will be held on November 28 and 29.

Single Operator – 24 hours

VK4OE	2418 points
VK3DAG	1524 points
VK4ALH	1397 points

Single Operator – 8 hours

VK5ZT	1217 points
VK3HY	1159 points
VK5AGZ	823 points

Multi Operator – 24 hours

VK5LZ	1244 points
VK4WIE	1118 points

Multi Operator – 8 hours

VK3XPD	1849 points
VK5LZ	1244 points
VK3AWS	646 points

Home Station – 24 hours

VK3OE	1222 points
VK3WT	1123 points
VK3VFO	998 points

Harry Angel Sprint 2009

Results

Contest Manager Ian Godsil VK3JS received 33 logs but reminded us that some of those who participated but did not submit a log could have earned a certificate if they had sent theirs in.

The CW section continued to receive support and the VKCL contest logging program again proved to be winner for both the testers and the contest manager alike.

The contest manager was pleased by the increased participation of YLs and how the F-calls continue to support another local contest. Ian emphasise that although the late Harry Angel was a VK4, it should not mean that only VK4 operators should be the main group involved. There is room for a wider selection from central and western states.

CW

VK3IO	34 points
VK2GWB	32 points
VK4BZ	30 points
VK2PN	28 points
VK2BHO	26 points
VK2BJT	24 points
VK3TX	22 points
VK2AVQ	20 points
VK2CTN	14 points

SSB

VK4RC	62 points
VK4YZ	59 points
VK4PTO	56 points
VK4VCH	48 points
VK4TAA	47 points

VK2ZCM	46 points
VK4EA	41 points
VK4DGS	41 points
VK2BV	41 points
VK4IM	38 points
VK4KET	35 points
VK4DC	35 points
VK2LET	31 points
VK4JRO	26 points
VK7JGD	25 points
VK4MON	24 points
VK2HBG	23 points
VK3PDG	22 points
VK4ION	21 points
VK2FGJW	16 points
VK4AU	13 points

Mixed

VK4XY	64 points
VK2IG/QR	41 points
VK4EV	24 points

QRP Hours Contest 2009

Results

CW

VK3GDM	10 points
VK3JS	9 points
VK1ACE	8 points
VK3JY	8 points

SSB

VK2TEZ	14 points
VK7JGD	13 points
VK2ASU	8 points

Mixed

VK4SN	31 points
VK4XY	25 points
VK3WF	18 points

CW practice for contests

How did you go in the WAE CW contest? If you had trouble with the QTCs, Phil VK4BAA has sent in a great tip. How about visiting the Learn CW Online website at <http://lcwo.net/> There is a training program available for receiving QTCs and it is a browser-based environment to learn and practice Morse code. It is great to hear from Phil, I knew you could not stay away from us for too long, hi hi!

2010 World Radiosport Team Championships

With the 2010 WRTC event 9 months away you will find their website starting to come alive with regular updates and news items. The WRTC will occur in conjunction with next years IARU HF World Championships contest in July. So it is worth taking a regular peek at www.wrtc2010.ru/

Worked All Europe DX Contest 2008 – how the VKs went

Congratulations to the following category winners of last year's events:

CW VK2	VK2GR	184 points
CW VK4	VK4TT	240 points
CW VK8	VK8AV	1131 points
SSB VK2	VK2GWK	1092 points
SSB VK3	VK3TZ	5670 points
RTTY VK5	VK5NPR	161590 points
RTTY VK7	VK7AD	250 points

Spring VHF-UHF Field Day 2009

Saturday and Sunday 28 and 29 November 2009.

Contest manager: John Martin VK3KM

Duration in all call areas other than VK6: 0100 UTC Saturday to 0100 UTC Sunday.

Duration in VK6 only: 0400 UTC Saturday to 0400 UTC Sunday.

Please note that there is now a 3 hour difference between the eastern states and Western Australia, because daylight saving time no longer applies in WA.

Sections

- A: Portable station, single operator, 24 hours.
- B: Portable station, single operator, 8 hours.
- C: Portable station, multiple operator, 24 hours.

- D: Portable station, multiple operator, 8 hours.
- E: Home station, 24 hours.

Entrants may enter more than one section.

Operating periods: Stations entering the 8 hour sections may operate for more than 8 hours, and select which 8 hour period they wish to claim for scoring purposes. If a station operates for more than 8 hours, it may enter both the 24 hour and 8 hour sections. If the winner of the 24 hour section has also entered the corresponding 8 hour section, his log will be excluded from the 8 hour section.

Two operators: If two operators set up a joint station with shared equipment,

they may choose to enter Section A or B as separate stations under their own call signs, or Section C or D under a single call sign. If they enter Section A or B, they may not claim contacts with each other.

Multi-operator stations: Stations with more than two operators must enter Section C or D. Operators of stations in Section C or D may not make contest exchanges using call signs other than the club or group call sign.

General Rules

One call sign per station. Operation

Continued at foot of page 45

DX - NEWS & VIEWS.

John Bazley VK40Q,

E-Mail: john.bazley@bigpond.com

Yemen 2000 comes good

The ARRL DXCC Desk announcement that 701YGF will now be accepted for DXCC credit certainly generated a lot of interest! In April 2000 a **German led DXpedition to the Yemen, 701YGF**, created a considerable amount of activity, for there were many DXers that needed the Yemen for an all time new one. The operation shut down abruptly and then struggled for approval by Newington for DXCC credit.

The 701YGF (Yemen-German-Friendship) DXpedition made some 35,000 QSOs in just less than 10 days by a team that included DK9KX, DK1II, DL5EBE and DJ7MG (who passed away several years ago).

To quote from the recent official announcement by Bill Moore NC1L:

After reviewing recently-received information regarding the 701YGF operation, and after additional dialogue with a leader of the DXpedition, the DXCC desk has approved this operation.

Considering the length of time that has passed since this operation, we ask that DXCC participants who would like to claim credit for 701YGF follow the options below:

Send the 701YGF card ONLY to DXCC with a SASE, or return postage if outside the US; DXCC will process the card and applicants will not be charged a submission fee. 701YGF cards included with other cards will be handled as part of a normal submission. Bring the card to a DXCC Card Checker. The card checker will forward the confirmation to the DXCC desk for processing. Again, there will be no submission fee if this is a single-card submission. You must fill out an application form, however.

In all other cases, applicants can include their QSL card with their next submission, and it will be handled normally. We will work with the 701YGF team to use Logbook of the World if possible.

Remember, the cut-off date for the 2009 DXCC Annual listing and Honour Roll list is December 31, 2009. We encourage applicants to handle this sooner rather than wait until the last minute.

Those who still need a paper QSL

card for 701YGF can send their request to DJ3XD (he was the original QSL manager for CW QSOs, but now he will handle SSB and RTTY as well). The logs are expected to be uploaded to LoTW shortly.

Frank Donovan W3LPL informed The Daily DX News Letter that the Thursday July 16th 2009 edition of The Daily Herald (an online news source based out of Philipsburg, St. Maarten) is reporting that "St. Maarten (PJ7) and Curacao (PJ2) are destined to become countries within the Dutch Kingdom by October 2010 as long as the criteria set by the Dutch government are met". The expected date is October 10th or "10/10/10". The Netherlands Antilles, which currently includes Curacao (PJ2), Bonaire (PJ4), St. Maarten (PJ7), Saba (PJ6) and St. Eustatius (PJ5), would then "cease to exist" as both St. Maarten and Curacao would become two new countries "in the Dutch Kingdom" with the "Dutch public entities - Bonaire, St. Eustatius and Saba (BES Islands)" emerging.

The dates and call signs for the IOTA DXpedition to **Papua New Guinea** will be as follows:

22nd to 26th October: P29VCX
Tanga Islands (OC-102) QSL via SM6CVX

27th to 31st October: P29VLR
Green Islands (OC-231) QSL via SM6CVX

2nd to 9th November: P29NI
Woodlark group (OC-205) QSL via G3KHZ

The operators will be Luis CT1AGF, Derek G3KHZ, Gordon G3USR, David M0VTG and Hans SM6CVX. They plan to be active on 160 m to 10 m CW, SSB and RTTY. While the main team will leave for home after operating from OC-205, Hans SM6CVX plans to continue the trip. He would like to go and operate as P29VCX from the **D'Entrecasteaux Islands (OC-116)** on 11 to 13 November. QSL via home call.

Karl DL2FAG is heading to the Pacific for a three island holiday style operation lasting six weeks.

First stop will be on **Niue Island** where he will be QRV from October

19th to November 17th. He has already received his ZK2DL licence from the Telecommunications Department of Niue. Plans are to use an IC-7000 and triple leg multiband antenna and dipoles for activity on 3.5 through 28 MHz mostly on RTTY, PSK and SSB. His next stop will be from **New Zealand's South Island** for activity as ZL4/DL2FAG from November 8th to 18th with expected QRV on 7 through 28 MHz on RTTY, PSK and SSB.

Karl's final stop will be on **Samoa** where he will be QRV from November 17th to 30th again on SSB, RTTY and PSK on 3.5 through 28 MHz. He has already received his 5W0KH licence from the Office of the Regulator in Apia. Karl has a Website with details and a log search for his upcoming ZK2, ZL4 and 5W0 trip at www.qsl.net/dl2fag QSL via DL2FAG.

XR0YA is the callsign issued for the DXpedition to **Easter Island (SA-001)** which will take place between 31st October and 15th November. The six team members, Marco CE6TBN, Leszek NI1L, Ar PA3C, Zbig SP7HOV, Stan SQ8X and Victoria SV2KBS have been granted permission to operate on all bands, and they plan to focus on 160, 80, 40 and above all 30 metres (CW only, as digital modes on 30 m are not allowed). Working Europe on 30 metres will be their priority during the first week on the island. XR0YA will have three stations with two amplifiers and several antennas. Although SSB will not be neglected, CW will be the main operating mode, with some RTTY being planned as well. QSL route TBA. Further information can be found on the DXpedition web site (<http://rapanui2009.org/>).

Stan EI6DX (UA1OUT) will operate as 6W/EI6DX from **Senegal** from 7th to 16th November. He will concentrate on the low bands using CW, and will take part in the Ukrainian DX and Japan International DX contests. QSL via RX3RC, direct or bureau. Updates and further information will be at <http://www.ei6dx.com/senegal>

Allan Mason VK2GR (H44MA, ZK1GGR) will be working for Australian Doctors International (www.adl.org.au) on an assignment in **Kiunga (QI03pv), Western Province, Papua New Guinea** between September and December 2009.

He will be QRV in his spare time as P29CW.

This is a re-issued call as the previous owner was Peter Linden VK3AMX/WA7VDF, who was tragically killed in a plane crash in 1996. "Due to the availability of power, P29CW will not be active on the many field trips during this period of operation", says Allan. QSL cards should be sent direct only to VK2IR with either three US green stamps or one new IRC.

C6APR will be active from the Bahamas in the CQWW SSB 2009. Operators will be W2GJ, K3IXD, W3PP and K4QO, from "Crooked Island Lodge." Look for them from October 22nd to 26th and QSL via K3IXD.

Chris Megaw 4W6FR in Dili, East Timor, is now half way through his stay there and still getting on the air whenever he can. He favours 20m PSK31 although he has had success in keeping skeds with weak stations using the "Olivia" digital

mode. He tries to get on the ANZA Net on 14183 at 0515 Z daily, whenever his work permits.

Jacek SP5EAQ (3D2MJ) and Jacek SP5DRH (3D2KJ) will be active from Viti Levu (OC-016), Fiji, from 1st October for four weeks. They will operate on all bands, with an emphasis on the low bands. The two stations will be using small amplifiers and vertical antennas. QSL via home calls.

Lot DJ9ZG and Babs DL7AFS will be active as J79ZG from Dominica (NA-101) from 27th September to 15th October. They plan to operate RTTY, PSK and SSB on 80 to 6 metres. QSL via DL7AFS, direct or bureau. Their website is at www.qsl.net/dl7afs

The October 19th DXpedition to Sable Island by N0TG, AA4VK and WA4DAN is "being placed on hold" as N0TG's son, Carter, is ill. The web site, www.CY0dxpedition.com, is being left up and updates on Carter's progress will

be added from time to time, as well as plans to reschedule the CY0 operation.

MM0DWF/DL9LB, Lars, tells us he is indeed going back to South Georgia again. He will be arriving "around the second week of October" and leaving in mid-November. This is all dependent on the weather. Lars will be working on the island and plans to operate as VP8DIF as time permits. More information can be found on his Web page at www.lars-boehme.de/vp8dif/index.html QSL via DJ9ZB.

Good luck in the pile-ups until next month.

Special thanks to the authors of *The Daily DX (W3UR)*, *425 DX News (11JQJ)* and *QRZ.DX* for information appearing in this month's DX News & Views. For interested readers you can obtain from W3UR a free two-week trial of The Daily DX from www.dailydx.com/trial.htm

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Continued from page 43

Spring VHF-UHF Field Day 2009

may be from any location. A station is portable only if all of its equipment is transported to a place which is not the normal location of any amateur station. Stations may change location during the Field Day provided the station is dismantled and reassembled each time it moves. You may work stations within your own locator square. Repeater, satellite and crossband contacts are not permitted.

No contest operation is allowed below 50.150 MHz. Recognised DX calling frequencies must not be used for contest activity. Suggested procedure is to call on .150 on each band, and QSY up to make the contest exchange.

Contest Exchange

RS (or RST) reports, a serial number, and your four digit Maidenhead locator. The Maidenhead locator is optional if it has already been exchanged in a previous contest during the Field Day and neither station has moved since then.

Repeat Contacts

Stations may be worked again on each band after three hours. If the station is moved to a new location in a different locator square, repeat contacts may be made immediately. If the station moves back into the previous locator square, the three hour limit still applies to stations worked from that square.

Logs

Logs should cover the entire operating period and include the following for each contact: UTC time; frequency; station worked; serial numbers and locator numbers exchanged.

Scoring

For each band, score 10 points for each locator square in which your station operates, plus 10 points for each locator square worked, plus 1 point per contact. Multiply the total by the band multiplier as follows:

6 m	2 m	70 cm	23 cm	Higher
x 1	x 3	x 5	x 8	x 10

Then total the scores for all bands.

Cover Sheet

The cover sheet should contain the names and call signs of all operators; postal address; station location and Maidenhead locator; the section(s)

entered; the scoring table; and a signed declaration that the contest manager's decision will be accepted as final.

Please use the format at foot of page for your scoring table. In this example the operator has operated from one locator and worked four locators on each band:

A blank cover sheet, with scoring table, is available on the Field Day page of the WIA web site.

Entries

Paper logs may be posted to the Manager, VHF-UHF Field Day, 3 Vernal Avenue, Mitcham, Vic 3132. Electronic logs can be e-mailed to vhf-contests@wia.org.au Acceptable log formats include: ASCII text, RTF, DOC, XLS, MDB, or any Open Office format.

Logs must be received by Monday, 14 December 2009

Early logs would be appreciated.

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Band	Locators Activated (10 points each)	+	Locators Worked (10 points each)	+	QSOs (1 point each)	x	Multi-plier	=	Band Total
6 m	10	+	40	+	40	x	1	=	90
2 m	10	+	40	+	30	x	3	=	240
70 cm	10	+	40	+	20	x	5	=	350
etc.									
Overall Total									= 680

Latest DXCC standings

Eddie DeYoung VK4AN

WIA Awards Manager & Awards Committee Chairman

awards@wia.org.au vk4an@wia.org.au

Notes to reading the lists

Multi-band entries are also included, as well as previously deleted (non-WIA members) listings. This is per the agreement of the Awards Committee.

"SK" calls have been deleted.

The numbers for the general DXCC entries indicate the number of current DXCC countries and the second number includes deleted countries.

Anyone who feels there is an error in the listing should contact me via awards@wia.org.au

CALLSIGN	COUNTRIES	CALLSIGN	COUNTRIES	CALLSIGN	COUNTRIES	CALLSIGN	COUNTRIES
DXCC Ex. (338) Phone							
VK4LC	338/384	VK3PA	298/299	VK8LC	138/138	VK6AJ	292/304
VK5WO	338/371	VK2CA	297/297	VK5ATU	136/139	VK2CWS	245/247
VK6LK	338/363	JA3EY	296/300	OK1ZSV	136/136	VK3DQ	243/270
VK3QI	338/352	DL1TC	294/295	VK4FNQ	134/134	VK3KE	238/238
VK3AKK	338/351	VK3DU	292/301	VK2KCD	133/133	VK3CIM	235/236
VK2FGI	338/343	VK2CSZ	290/293	SV1XV	130/131	RD3AF	233/233
		VK6IR	289/289	WA5UA	128/128	VK6RO	231/233
		VK6ANC	287/291	VK4VIS	127/129	VK6DU	230/232
Honour Roll (329) Phone				VK2HOT	125/125	VK7TS	219/219
VE6VK	337/374	VK4BAY	287/290	CU3AAT	125/125	VK3PA	215/216
VK6NE	337/353	VK7TS	285/286	VK2MWG	125/125	DL6USA	207/207
VK3DYL	337/343	VK3JMB	285/285	SV1UT	123/123	VK2AR	206/211
VK3SX	337/343	VK6DU	281/284	VK2VZQ	122/122	DL7PA	203/203
VK2FGI	337/343	VK3UY	264/266	VK4EZ	119/125	VK2GR	181/188
VK4UA	336/371	JA7MGP	260/260	VK5UO	112/115	PY2DBU	181/183
VK6HD	336/362	VK2XH	257/257	VK3CML	109/109	VK4CXQ	174/174
VK5MS	335/389	DL3ASJ	256/256	XV2LC	109/109	VK5UO	171/172
VK7YP	336/341	VK8NSB	255/255	VK9RS	107/107	SP9ADV	168/171
VK3AMK	335/354	VK3CIM	254/258	VK6ISL	106/106	DK6AP	168/168
VK3EW	335/341	VK8DK	253/254	8Q7LC	105/105	VK6LC	157/157
VK3TZ	335/339	DL6MRS	252/252	VK4XES	104/104	VK4UA	151/164
VK3OT	334/345	VK2AU	250/250	VK3HGN	103/103	VK4AAR	145/147
VK1ZL	334/338	VK2FHN	246/246	SV1GYG	102/102	DL1TC	133/133
VK2AVZ	333/344	VK4AO	240/240	SV1FTY	102/102	DL6UGF	126/126
VK2DEJ	333/339	VR2XMT	235/235	VK4TJF	101/101	DJ4BG	121/121
VK6APK	333/338	VK2RO	231/233	VK2VEL	101/101	DF6NS	120/120
VK4AAR	331/335	VK4DMP	227/228	VK6ZAI	100/100	VK2CA	115/115
VK3EUZ	329/330	UA6LDD	225/226	VK5JAZ	100/100	VK5BWW	110/113
		DL6USA	210/210	HS1NGR	100/100	T94VT	108/108
		VK3DVT	206/209			VK4EJ	108/108
		VK6RZ	203/206			9A2KL	103/103
General listing - Phone						DL3GDS	102/102
VK3YJ	327/333	VK7JAB	198/198	DXCC Ex. (338) CW			
VK6ABS	327/327	VK2EJK	195/195	No claims			
VK5FV	326/329	VK2EO	195/195			VK5ATU	100/102
VK4SJ	326/327	9A2KL	172/175				
VK2UK	325/330	VK6EH	170/170	Honour Roll (329) CW			
VK2HV	322/322	VK2BQS	166/169	VK3QI	337/349	DXCC Ex. (338) Open	
VK4LV	320/322	DL9UBF	165/165	VK6HD	336/357	VK4LC	338/384
VK6LC	318/320	VK5EMI	160/160	VK5WO	336/352	VK5WO	338/375
VK6RO	314/320	VK7LUV	160/160	VE6VK	333/360	VK3QI	338/353
VK4EJ	309/311	SV1EOS	157/157			VK3OT	338/352
DL2AWG	309/309	JA6KTY	156/156	General listing - CW			
PY2DBU	308/315	VK6HZ	151/151	VK6RZ	324/329	VK3AKK	338/351
VK4AN	307/314	VK2SPS	143/145	VK3AKK	320/325		
VK4ICU	303/305	AX4EJ	141/141	DL7VMM	315/315		
VK4QO	301/306	VK2QV	141/141	VK4XA	306/333		
VK3KE	300/303	VK3JXO	141/141	VK4AN	304/310		
		VK3DQ	138/152	VK4LV	301/308		

CALLSIGN	COUNTRIES
Honour Roll (329) Open	
VE6VK	337/382
VK6HD	337/364
VK3SX	337/343
VK4UA	336/373
VK3AMK	335/354
VK3EW	335/341
VK6APK	335/340
VK3OT	334/348
VK2AVZ	333/344
VK4AAR	333/337
VK3UY	333/336
VK6RZ	330/336
VK4AN	329/337
General listing - Open	
PY2DBU	328/343
VK6RO	328/334
VK2HV	327/327
VK2UK	326/331
VK4LV	325/333
VK6LC	318/320
VK4DV	317/331
VK6DU	314/317
VK4ICU	311/313
VK3KE	306/309
VK3PA	304/305
DL1TC	302/303
VK2CA	301/301
VK7TS	295/296
PY2DBU	294/298
VK6IR	294/294
VK3JMB	288/288
9A2KL	280/283
UA6LDD	279/280
VK6MK	256/259
VK8NSB	256/256
VK3DQ	255/284
VK5UO	251/255
VK2CWS	251/253
DL6USA	250/250
VK2FHN	249/249
VK2AR	215/220
DL9UBF	206/208
SP9ADV	200/203
VK2BQS	183/186
VK2GR	184/191
VK4CXQ	179/179
VK5ATU	171/174
VK4DC	168/168
DL6UGF	161/161
SV1EOS	161/161
VK3VB	153/155
VK6HZ	151/151
VK3JXO	146/146
VK2SPS	144/145

CALLSIGN	COUNTRIES
SV1XV	142/144
VK4EZ	140/147
ON5SPA	127/127
VK2WL	124/126
VK7CQ	123/125
VK5DC	117/118
N0MSB	117/117
VK2AJE	109/109
VK2VEL	109/109
UA0IGV	103/103
VK2AWD	102/106
VK5CO	100/106
VK5GX	100/101
VK1AI	100/100
RA3BZ	100/100
DL1APX	100/100
General listing - Data	
VK3EBP	253/255
VK3KE	210/210
VK3AMK	200/202
VK4AN	160/160
VK2BQS	126/128
DL4ARJ	120/120
ON5SPA	111/120
VK6DU	103/103
VK5RY	100/102
Gen-listing - 6m	
VR2XMT	154/154
VK4FNQ	141/141
VK4ABW	109/109
VK6JQ	103/104
VK4CXQ	101/101
Gen-listing - Satellite	
VR2XMT	112/114
VK3XDQ	106/106
General listing - SWL	
VK5-398738	125/125
DE2DAD	100/100
3B DXCC - OPEN	
VK4AN	814
PY2DBU	662
VK3KE	599

CALLSIGN	COUNTRIES
3B DXCC - PHONE	
VK6LC	598
VK3DYL	577
VK2CA	547
VK4QO	538
VK2DEJ	536
VR2XMT	461
3B DXCC - CW	
VK3PA	364
5B Classic DXCC - OPEN	
VK6HD	1605
VK4AN	1167
VK6LC	955
VK5WO	920
UA6LDD	907
VK3TZ	898
5B Premier DXCC - OPEN	
VK4AN	1132
VK3EW	974
PY2DBU	891
VK3KE	821
5B Classic DXCC - PHONE	
VK3EW	1489
VK3PA	957
5B Premier DXCC - PHONE	
VK2CA	810
5B Classic DXCC - CW	
No claims	
5B Premier DXCC - CW	
No claims	
7B DXCC - PHONE	
No claims	
7B DXCC - OPEN	
VK4AN	1463
VK5WO	1135
7B DXCC - CW	
No claims	
9B DXCC - OPEN	
VK6HD	2737
VK3QI	2520
VK3EW	2214

Rare, remote, restricted and really sought after

A recent survey by Dx World of Ham Radio returned the following locations as the 50 most wanted DXCC entities.

Some are remote, others are restricted and several are remote and restricted.

The list is in order of 'most sought after.'

DX Entity

1. North Korea
2. Yemen
3. Navassa
4. Glorioso
5. Marion I
6. Amsterdam I
7. Heard I
8. Bouvet
9. Crozet
10. S.Orkney
11. S.Sandwich
12. Malpelo
13. Kingman Reef
14. Auckland/Camp
15. Midway
16. Tromelin
17. Macquarie
18. Palmyra
19. Conway Reef
20. Juan de Nova
21. Wake Island
22. Chesterfield
23. Scarborough Reef
24. Pratas
25. Baker & Howland
26. Johnston Atoll
27. St Peter & St Paul
28. Mount Athos
29. Eritrea
30. Central Kiribati
31. South Georgia
32. San Felix
33. Kure Atoll
34. Trinidad
35. Myanmar
36. Mellish Reef
37. Kermadec
38. Kerguelen
39. Tristan da Cunha
40. Banaba
41. Annobon
42. Minami Torishima
43. Temotu
44. Tokelau
45. Spratly
46. Andaman
47. Palestine
48. Lakshadweep
49. Willis Island
50. Desecheo

News From

Justin Giles-Clark, VK7TW

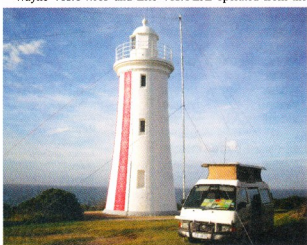
Email: vk7tw@wia.org.au

VK7

International Lighthouse Weekend in VK7

The weekend was a great success even though we had the "big blow" come through Sunday. Winston VK7EM at Mersey Bluff lighthouse was well equipped with separate antennas, on 80, 40, 20 metres and a squid pole vertical for 40 and 20 metres. Many contacts were made including Tanjung Gelang, in West Malaysia and the historic Point Fermin lighthouse in Los Angeles.

Wayne VK7FWAY and Eric VK7FEJE operated from the

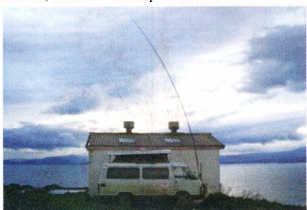


Winston VK7EM at the Mersey Bluff Lighthouse
(photo courtesy of Winston)

Table Cape Lighthouse with a G5RV dipole and squid pole and also made many contacts. (see ILLW story page 29)

John VK7ZZ operated the Cape Bruny lighthouse and ended up using the lighthouse flag halyard to hold the squid pole vertical and made 29 contacts with other lighthouses including Malaysia, the U.S. and quite a few in N.Z.

Bill VK7MX, Peter VK7KPC, Duncan VK7FLAK and Yvonne, VK7FYMx all operated from the Low Head



John VK7ZZ at the Cape Bruny Lighthouse (photo courtesy of John)

Lighthouse on the mouth of the Tamar River and I think they may have had the best operating position in the old keeper's cottage.

HF squid pole verticals were the order of the day. Brin VK7FBW over 2 m gave the early warning of severe weather. Many contacts were made and fun experienced despite testing the near vertical incidence skywave (NVIS) characteristics of the squid poles during the gales! Gavin VK7VTX operated from the Pot Boil Channel lighthouse on Flinders Island. The author made contact during the RD and he was being inundated with lighthouses and RD contacts and loving it!

Northern Tasmania Amateur Radio Club

Members of NTARC at a Special General Meeting on August 12 decided to incorporate and adopt a new set of rules. Thanks to Bill VK7MX for his work in developing the rules. At the end of proceedings the current President Allen VK7AN announced he was resigning and a great big thank you goes to Al for all his work with NTARC over the years.

Cradle Coast Amateur Radio Club (CCARC)

August saw CCARC run its first examination session and we welcome Steven VK7FXXX and Hamish VK7FHAM to the airwaves. Congratulations to our newest F-calls in VK7.

North West Tasmanian Amateur TeleVision Group

NWTATVG met for a social dinner meeting at the Bass & Flinders Restaurant in August and it was enjoyed by members and XYLS. A significant donation was made to the club at the meeting to assist the Club in promoting the hobby. A reminder that WIA National and VK7 Regional News broadcasts are now replayed on Sunday Nights at 7:30 pm on IRLP Nodes 6616 and 6124 via VK7RTV- 6 metres and 147.425 simplex.

WICEN Tasmania (South)

Over 14 - 15 August the WICEN crew were assisting with the safety checkpoint communications for the Horse Endurance Ride in Southern Tasmania. This event was held at Clifton Vale between Dysart and Elderslie. The survey was held on the Friday afternoon with the actual ride on Saturday with an early 6.45 am start!

Radio and Electronics Association of Southern Tasmania

It was great to catch up with Johnny Tan 9M8DB from Sarawak, visiting his daughters who are studying in VK7. Johnny is a regular on the SEAsiaNet and was on his way to GAREC in Japan. It was also great to catch-up with Paul K2PH who was visiting his son who is at UTAS. Paul attended the REAST September presentation which was a talk and video by Rex VK7MO and your author on the activities during World Moon Bounce Day in June at the Mt Pleasant 26 m Radio Telescope. Thanks also to Paul VK7FPAH who produced a beginner's guide to EME video around the activities on the day.

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Local Events and Launch Vehicles

This month there is news of a demonstration put on by AMSAT-VK members, a DXpedition for this summer, potential future launch opportunities, and updates on various satellites.

AMSAT-VK demonstration

The Blue Mountains Amateur Radio Club (BMARC) recently held their 'Winterfest' which AMSAT-VK was invited to attend. The event was held at the club's meeting rooms at Orchard Hills NSW and also featured other groups, e.g. ALARA and the Homebrewer's Group and various vendors.

The purpose of attending the Winterfest was to publicise the activities of AMSAT-VK with information handouts and a display of basic equipment for working the FM satellites. We were fortunate in that there was a good SO-50 pass at lunch-time and weather conditions were favourable.

Mal VK2MAL worked the satellite portable using a Kenwood TH-D7A full-duplex HT and an Arrow antenna. Mal also plugged in an old TV speaker to the HT so that spectators could hear the QSOs without difficulty.

We would like to thank Brett VK1AMG, Alex VK5ALX and Cris VK2BOZ for making the effort to work SO-50 and making contact with Mal. Rob VK2GOM was also working portable in the club grounds for the pass.

The demonstration produced a lot of interest generally from operators who had not considered working satellites before the demonstration, to those

who used to work the birds in 'the old days' and were inspired to come back to them.

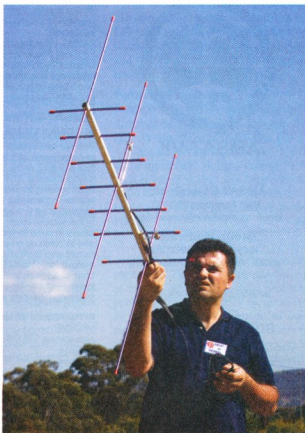
We would also like to thank Tim VK2XTT President of BMARC for the opportunity to take part in their Winterfest and Mal VK2MAL and Judy VK2TJU for manning the table.

If any other clubs would like AMSAT-VK to attend an event and hopefully demonstrate working satellites, please contact the coordinator whose email address appears in the AMSAT-VK info-box and we will try to arrange for representatives to attend.

My thanks go to Judy VK2TJU and Mal VK2MAL for this item.



Judy VK2TJU at the table at BMARC Winterfest.



Mal VK2MAL portable at BMARC Winterfest August 2009

Antarctic DX

Bill Erhardt from Montana, USA, will be doing a tour of duty at McMurdo Base in the Antarctic from November to February. He will be taking an Arrow II antenna and Kenwood TH-7(G) to make contacts on SO-50 and AO-51.

Another amateur will take all-mode radios for AO-7, FO-29 (if operational) and VO-52. Sunday will be the best time as it is his normal day off. He hopes to work plenty of VK and ZL amateurs. The base callsign is KC4USV.

McMurdo Base is located at 77.3 S and 165.0 E, which is almost due south of New Zealand and is in New Zealand's time zone.

Distances from capital cities are Adelaide 4913 km, Brisbane 5601 km, Darwin 7485 km, Hobart 3940 km, Melbourne 4509 km, Perth 5632 km, and Sydney 4992 km.

Given that SO-50 has an average footprint diameter of 5500 km and AO-51 has 6000 km, the times when McMurdo base, VK and ZL stations are in the footprint will be rather short.

Quick QSOs of name, grid square, and a short message will probably be needed if there is a queue waiting to talk to Bill. The mutual window will only be a few minutes at best.

For the analogue birds VO-52 has a footprint of 5400 km, FO-29 varies from 6000 to 7600 km, and AO-7 has the best range of 7900 km. With AO-7 it may be possible to have a QSO from most of VK/ZL.

Thanks again to Judy VK2TJU for making this upcoming event known.

If it sounds too good to be true...

An item that has done the rounds of the AMSAT-BB mailing list and the WIA broadcast concerned the proposed flight of TubeSat Personal Satellites.

TubeSat is a system devised by Interorbital Systems, a company that manufactures rockets and spacecraft. TubeSat consists of a rocket that will launch 32 TubeSat Personal Satellites into low Earth orbit at an altitude of 310 km. At this height the satellites' orbit will

probably decay in less than a year.

The TubeSat satellites are small cans with a mass of only 0.75 kg. Double, triple and quadruple sized TubeSats are available. For a fee of only US\$8000 they will supply in kit form the case, solar panels, batteries, transceiver, processor and programming software. The user will have 200 grams left for their project. This is a real bargain when you consider the price also includes the launch.

The idea has some merit. Cubesats have demonstrated that worthwhile projects and experimental platforms can be constructed in packages with a mass of 1 kg and volume of 1 litre. The TubeSat would be ideal for testing new materials, sensors and circuits (e.g. microwave beacons) for limited periods in the harsh conditions of space.

Then it probably is

On to the harsh reality. TubeSat's proposed 2010 launch is from Interorbital System's launch site on the South Pacific island of Tonga. According to their



AMSAT Co-ordinator
Paul Paradigm VK2TXX
email: coordinator@amsat-vk.org

Group Moderator
Judy Williams VK2TJU,
email: secretary@amsat-vk.org

Website:
www.amsat-vk.org

Group site:
group.amsat-vk.org

About AMSAT-VK

AMSAT-VK is a group of Australian amateur radio operators who share a common interest in building, launching and communicating with each other through non-commercial Amateur Radio satellites. Many of our members also have an interest in other space based communications, including listening to

and communicating with the International Space Station, Earth-Moon-Earth (EME), monitoring weather (WX) satellites and other spacecraft.

AMSAT-VK is the primary point of contact for those interested in becoming involved in amateur radio satellite operations. If you are interested in learning more about satellite operations or just wish to become a member of AMSAT-Australia, please see our website.

AMSAT-VK monthly nets

Australian National Satellite net

The net takes place on the 2nd Tuesday of each month at 8.30 pm eastern time, that is 9.30 Z or 10.30 Z depending on daylight saving. The AMSAT-VK net has been running for many years with the aim of allowing amateur radio operators who are operating or have an interest in working in the satellite mode, to make contact with others in order to share their experiences and to catch up on pertinent news. The format also facilitates other aspects like making 'skeds' and for a general 'off-bird' chat. In addition to the EchoLink conference, the net will also be available via RF on the following repeaters and links.

In New South Wales
VK2RMP Maddens Plains
repeater on 146.850 MHz
VK2RIS Saddleback repeater on
146.975 MHz
VK2RBT Mt Boyne
Repeater on 146.675 MHz

In Victoria
VK3RTL Laverton, Melbourne,
438.600 MHz FM, - 5 MHz offset

In South Australia
VK5TRM, Loxton on 147.125 MHz
VK5RSC, Mt Terrible on 439.825 MHz
IRLP node 6278, Echolink node 399996

In Tasmania
VK7AX, Ulverstone on 147.425 MHz

In the Northern Territory
VK8MA Katherine 146.700 MHz FM
Operators may join the net via the above repeaters or by connecting to EchoLink on either the AMSAT-NA or VK3JED conferences. The net is also available via IRLP reflector number 9509. We are keen to have the net carried by other EchoLink or IRLP enabled repeaters and links in order to improve coverage. If you are interested in carrying our net on your system, please contact Paul via email.

Become involved

Amateur satellite operating is one of the most interesting and rewarding modes in our hobby. The birds are relatively easy to access and require very little hardware investment to get started. You can gain access to the FM 'repeaters in the sky' with just a dual band handheld operating on 2 m and 70 cm.

These easy-to-use and popular FM satellites will give hams national communications and handheld access into New Zealand at various times through the day and night.

Should you wish to join AMSAT-VK, details are available on the web site or sign-up at our group site as above. Membership is free and you will be made very welcome.

website this has not been built yet. TubeSat will be launched using their Neptune -30 launch vehicle. On the website there are details of tests of the rocket engines but no details of any launch of the rockets. Nor any pictures of a completed Neptune-30.

If all the TubeSats are bought then the total income is in the order of US\$250,000. They claim this will cover the launch vehicle and associated costs. Consider the current cost to launch a Cubesat is around US\$40,000 per kilogram. This may not include the cost of the Cubesat itself.

The size and weight of a Cubesat (or six) is not significant compared to the main payloads which may weigh tonnes. As a comparison, last year SpaceX launched their fourth rocket, Falcon1, with a 165 kg payload into a 500 x 700 km orbit. The launch cost was only US\$7.9 million. This was after over US\$100 million was spent in development and three launch failures.

It is still cheap compared to other commercial launches but somewhat more than Interorbital Systems proposal.

Another future launch system was recently announced by JAXA, The Japan Aerospace Exploration Agency.

They will spend US\$213 million to develop a small launch vehicle next year. It will use solid fuel rockets and be able to carry 1.2 tonnes into orbit at a cost of US\$32 million per launch (including the cost of the launch vehicle). While it will only carry half the load of JAXA's H-2A launch vehicle, it will cost only a third and be usable in much less time than a liquid fuelled rocket. JAXA plan to have its first launch in 2012.

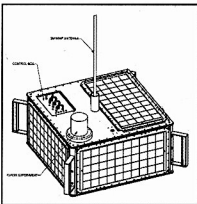
But history has shown that transportation has become more affordable over time. Rocket launches

will always be expensive but to get your own personal satellite in space may be possible in the future.

Details of Interorbital Systems proposals, sales brochures and the TubeSat project can be found at <http://interorbital.com/index.html>

Updates

Suitsat-2 has a new name- ARISSAT-1. The hardware originally planned for the Orlan spacesuit is now being incorporated into a new structure to be sent to the International Space Station in January 2010.



New shape, new name ARISSAT-1

As reported in last month's column, DragonSat was successfully launched from the Space Shuttle Endeavour. Unfortunately it has not separated into two satellites as planned. AggieSat-1 has been heard but BEVO-1 has remained silent. Castor and Pollux are continuing to be heard and telemetry downloaded.

FO-29 has had a hiccup and has gone silent. At the time of writing (late August) the command stations have switched on the CW telemetry beacon while it is over Japan. The last time

this happened was in April 2007. FO-29 is currently nearing the end of a long period of eclipses and this is putting some stress on the 13 year old batteries. The next maximum eclipse period is mid 2012.

AO-51 five years on

AO-51 celebrated its fifth birthday at the end of June. It still performs very well and is arguably the most popular satellite in use today.

A couple of messages from the command team have recently highlighted the changes that have happened since it was launched. The most important is that the power budget has decreased. The batteries are charged and discharged about 15 times a day whenever it is going through an eclipse period. The solar cells degrade over time.

It has now got to the stage where AO-51 can no longer support higher power usage operations such as the S-band transponder during eclipse periods. Regular users would have noticed the power levels during the May/June 2009 eclipse period were at their lowest ever to prevent excessive battery discharge.

The spin rate has also dropped down to 6 minutes per revolution. Nulls on the L/S band antenna are more noticeable. Overall AO-51 is still in very good shape and the command team are doing an excellent job in keeping it going.

Final Pass

FO-29's silence has shown once again that even the best satellites do eventually fail. At this stage it looks like FO-29 will not be a silent key just yet. It will be in maximum sunlight during 2010, with eclipses in 2011 and long eclipses in 2012. Time will tell if we can get a few more years of good service out of FO-29.

ar

QTY From VK3SN:

Congratulations to VK2HRX on his article documenting portable operation from Mt Kosciuszko which appeared in the September AR. I was delighted by his description of operating conditions, the rig set up and his various antennas. The photos were also excellent.

I would agree with the comments towards the conclusion of the article where he suggests that running the rig at full power on HF may have been unnecessary. From that location, even

Portable with power pack

with a compromise antenna, I suspect that QRP power levels or slightly higher would have readily sufficed and given excellent 40 m contacts across most of VK. The payoff (as noted in the article) would be greatly extended battery life.

SLA batteries are a cost effective and rugged means of running portable operations, but carrying the heavier high capacity units in a backpack up a mountain is no mean feat. One promising solution may be the emergence of ultra-

compact fuel cell technology using methanol. These will not run the rig at the full 100 W, but would probably provide enough output to give 10-20 W. With the development of ever more compact gear and refinements to alternative energy technologies, it is certainly a good time to play portable radio from interesting locations.

Great work VK2HRX - we all look forward to hearing more!

Cheers, VK3SN
Dr. Stephen Warrillow
FRACP FJFICM

ar

The Geelong Amateur Radio Club

Tony Collis VK3JGC

Presentation of the Peltier Effect

Greg VK3VOX gave a presentation to the club on the Peltier effect and some of its recent applications both in computers in the cooling of processor chips and power generation from heat generated in motor vehicle exhausts.

Greg explained the process wherein the cooling of one junction and the heating of the other occurs when an electric current is maintained in a circuit of material consisting

of two dissimilar conductors; this effect is even stronger in circuits containing dissimilar semiconductors.

In a circuit consisting of a battery joined by two pieces of copper wire to a length of

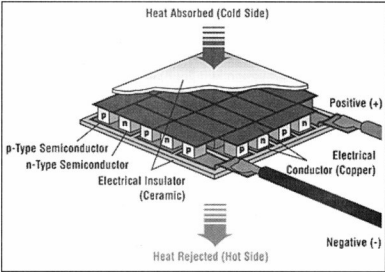
bismuth wire, a temperature rise occurs at the junction where the current passes from

copper to bismuth, and a temperature drop occurs at the junction where the current passes from bismuth to copper. This effect was discovered in 1834 by the French physicist Jean-Charles-Athanase Peltier.

The diagram below shows a thermoelectric cooler which is a special type of semiconductor that functions as a heat pump. By applying a low-voltage, high-current, DC power source, heat will be moved in the direction of the current (+ to -). The heat is pumped from one side of the module to the other, so that one face will be cold while the opposite face will be heated, and the effect is reversible.



Greg VK3VOX



The Peltier Effect

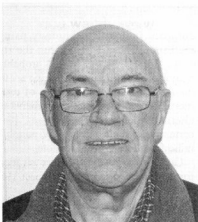
Peltier image courtesy Melcor NJ.

Presentation on Analogue and Digital Networks

In the digital corner...

Ken VK3NW explained to the GARC members the principles of working with Trunk Radio Digital Networks within Victoria; illustrating how the process works such that the operation of transferring from one Trunk, or branch, to another is seamless to the radio user. However there are situations where receiving multiple trunk sites, when the user is equidistant, and the subsequent multiple re-transmissions can render communication unintelligible.

Also, like digital TV, the system will suddenly cut out without any warning if the received signal levels are too low and your radio cannot find a new Trunk control site.



...In the analog corner

Bert VK3TU on the other hand extolled the virtues of the Analogue network. Although it may eventually be superseded by the Digital network, like analogue television, a poor signal still affords communication without the uncompromising rapid drop out of digital communications.

It does however suffer the same problems as digital when equidistant from two trunk sites. In order to seamlessly switch from one site to another the system requires accurate control of frequency, phase and transmission line delays that may be occasioned by twisted pairs to microwave links. Part of this process is to use GPS synchronising pulses.

ar



Building your own website

Rob Norman VK5SW

One of the great things about ham radio, nowadays, with the advancement of technology, is the ability, once you have worked someone on the radio, to look them up on the Internet to find out more information about them.

www.QRZ.com is the site most used for this and has information on most hams from around the world but it is up to the individual amateur to put their own information onto such a website.

I like to look up a callsign and see a picture of the person I have just worked and hopefully something about their station. This adds greatly to the enjoyment of our hobby.

The next step on from this is to see a website that the operator has made about him/herself, the radios, antennas, family, what it is like where they live, and so on. It is a free world, so you are able to put just about anything you like on your website, within reason. The more interesting the site, the more often people are likely to look at it.

I certainly do not know much about building websites. All I know is what I have taught myself by using a program which enables you to build your own site, a HTML editor.

It is a program by Microsoft called FrontPage, which I have had for about five years, so I am sure there are much better and more capable programs available nowadays. The website I have made is very simple by today's standards. It basically consists of a number of pages with text and photos on them showing my ham radio station and where it is located.

The point I am trying to make is that you do not need to be a rocket scientist to make your own website. I only have experience with this particular program but have been able to muddle my way through, in order to create a website and upload it onto the Internet.

However, for me, it did take some time to achieve but once you are able to upload your site, I have found that you will want to improve it. It becomes an evolving project where you think of new ideas of how to improve your site and then set about trying to do just that.

So, how do you go about building a website? Well, the easiest thing to do is to have a single page, or 'Homepage'.

To do that, using FrontPage, it is a matter of clicking on 'New Page' and a 'clean white page' appears on the screen. Along the top is a row of commands like: 'File, Edit, View, Insert, Format, Tools', and so on.

If you want a coloured page, other than white, you go to 'Format' and then to 'Background' and change the colour of the page. You can also use a picture, taken from the hard drive of your computer, as the background to your page. To adjust the colour and/or the type of print, click on Format again and change the 'Font' settings to your liking.

If you want the text to be centred, rather than starting from the left hand side of the page, you can simply do that with the click of the mouse. As with any new program, it takes a while to become used to the various features.

So, for example, you may want to start with a white page and a heading up the top and then some text, maybe your callsign, station details, whatever, and then you may wish to place a picture next to it.

To do this, make sure you click your cursor in the correct position for the image to appear and then click on 'Insert' and browse your hard drive for the appropriate picture. However, the file size of the image is important if it is going to be put on the Internet.

The smaller the file size, the quicker it will be downloaded to computers displaying your site. Most of the photos taken by digital cameras are too large to be put directly onto your page, so they need to be 'compressed' to reduce their file size.

Use the search engine Google, or similar, to find suitable free software with which to do this. I try to keep my images below 40 kilobytes (kB) in size. You can also change the dimensions of the pictures to suit your page, also by using free downloaded software.

Sooner or later, you are going to have to deal with the 'Code' (HTML) in order to improve your site. You will need to

learn how to 'cut, copy and paste' but do not be put off by this, take one thing at a time and you will eventually get there.

Once you are happy with the design of your page and have saved it, you will need to upload it to an FTP Server. Some service providers with whom you have your Internet connection, provide free hosting using a homepage address which might be something like <http://users.billjones.twilight> where 'twilight' is the service provider. At a later date, you may wish to purchase a 'Domain name'.

Uploading to a server is quite easy, once you get the hang of it, of course.

I use www.smartFTP.com. By typing in your user name and password and then by dragging and dropping your home page document and images onto the 'Upload page', it will finally be uploaded onto the Internet. Prior to doing this, your homepage document will have to be named 'index' or something similar.

For more exposure, you can list your homepage with websites that list only ham radio sites.

To succeed, you need to fail first to learn from your mistakes, so with perseverance, you will soon teach yourself the right way to go about things.

I have tried to make this article as simple as I can because firstly, I am not an expert and also, I believe the best way to build your own site, from my experience, is to obtain the appropriate software and have a go. Please visit

www.vk5sw.com

ar

EDITOR'S NOTE.

I took Rob up on his invitation to visit—amazing—this 'homebrew' site is one of the best, commercial or otherwise, I have ever seen. It is well coordinated, the navigation is immaculate, the content and sound excellent and it looks good.

At my visit Rob had had 10445 visits from 95 countries.

And lastly, Rob's site and his solar powered shack operate from a 'tin shed' about 150 kilometres north of Adelaide. From his doorway, on a clear day, you can just see the Black Stump.

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HEATHKIT SB101 TRANSCIEVER - all controls work well, except Filter knob is slightly stiff. Otherwise unit appears in quite good condition. Interior is covered in dust and I have never powered it up. HEATHKIT SB640 - Main dial band is missing. Other than that it appears to be in good condition. HEATHKIT HP23A power supply - appears to be in good condition. I bought these from a disposal store in Dee Why, NSW, about five years ago. They were about to go to the tip. An amateur had put his heart and soul into building these and I could not bear to see that happen. So I gave the owner \$200 for the lot. A call sign is on the SB101. They have sat on my shelf collecting more dust, and now I wish to see them go to a good home. I would appreciate \$200 for them. However if there is a young student who wants to learn about old valve gear, who would love to get them going, who will look after them, then he/she can have them for nothing. Please contact Tony Lewis on 0418 612 434 or email lewis.c@bigpond.net.au

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The Ozi-kits range of aeriels & digital modes interfaces are still available from the Mid North Coast Amateur Radio Group Inc. See our website for information, pictures & hints. <http://www.mncarg.org/> or mncarg@yahoo.com.au or P.O. Box 505 Bellingen NSW 2454

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<http://www.amateur-radio-wiki.net>

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Northern Territory

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Broadcast details

VK1	VK1WIA:	Sunday 0900 local on the Mt Ginini repeaters 146.950 and 438.050 MHz. The UHF repeater requires 123 Hz access tone and is linked to the Goulburn repeater.
VK2	VK2WI:	Sunday 1000 and 1930 local, on 1.845, 3.595, 7.146, 10.125, 14.170, 28.320, 52.525, 145.6000, 147.000, 438.525 and 1273.500 MHz. Also 5.425 MHz USB in the morning. Plus provincial relays both sessions and country relays in the morning via local repeaters. VK1WIA news is included in the morning.
VK3	VK1WIA:	Sunday 10:30 am and 8 pm Local Time. Amateur Radio Victoria VK3BWI B/cast Network: 3.615, 7.158, 10.133, 147.250 VK3RMM Mt Macedon, 146.700 VK3RML Mt Dandenong, 147.225 VK3RWG Mt Baw Baw, 439.800 VK3RMU Mt St Leonard.
VK4	VK1WIA:	Sunday 0900 local via HF and major VHF/UHF repeaters.
VK5	VK5WI:	Sunday 0900 local, on 1.843, 3.550, 7.140, 28.470, 53.100 AM, 146.900 (SE), 146.925 (CN), 147.000 and 439.975
VK6	VK6WIA:	Sunday 0900 local, on 1.840, 3.582, 7.140, 10.125, 14.116, VK6RHF Perth 29.680, VK6RAP Perth 53.800, VK6RAP Perth 146.700, VK6RMW Mt William 146.900, VK6RBN Busseton 147.350, VK6RUF Roleystone 438.525, and on UHF CB Ch 1 Perth North. Sunday 1900 local, on 3.565, VK6RHF Perth 29.680, VK6RAP Perth 53.800, VK6RAP Perth 146.700, VK6RMW Mandurah 146.900, VK6RMS Mt Saddleback 147.250, VK6RBN Busseton 147.350, VK6RUF Perth 438.525, and on UHF CB Ch 1 Perth North Also in 'Realaudio' format from the VK6WIA website.
VK7	VK7WI:	Sunday 0900 local, on 1.840 AM, 3.570, 7.090, 14.130, Hobart CB 27.225 LSB, 28.525, 53.825 FM, EchoLink Node 100478 (VK7AX-L) 145.350, VK7RMD NW 146.625, VK7RAD and VK7RHT South 146.700, VK7RNW NW 146.750, VK7RAA North 147.000, Ulverstone 147.425, Ulverstone 444.250/449.750 and Hobart UHF CB Channel 15. Tuesday 2100 local VK7RMD NW 146.625.
VK8		Sunday 0900 local, on 3.555, 7.050, 10.130, 14.180, 145.400 IRLP 6800 Katherine and 146.900 Darwin. Sunday 2000 local 145.400 IRLP 6800 Katherine.

Note that many clubs broadcast the WIA News via local VHF and UHF repeaters. Check the News section of the WIA website.

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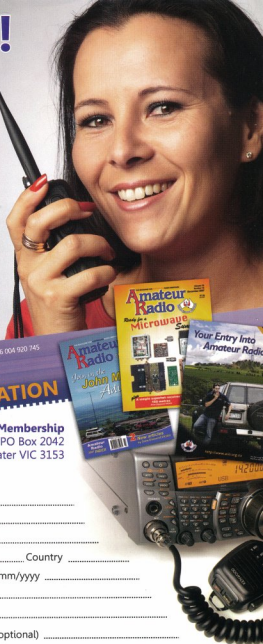
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